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34th Year Of Publication February 18, 1973 ★ 20 Paise

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THE Soviet Army, created to defend the gains of the socialist state, consisted, from the very outset, of people of all nationalities of the Soviet Land. This gave it remarkable strength and served as the source of all its victories over numerous foes. The combat strength of the Soviet armed forces was demonstrated particularly vividly in the years of struggle against Nazism.

In this article, Marshal of the Soviet Union, Ivan Bagramyan writes about the

(Contd. on Third Cover)

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MOUNT ROAD, MADRAS-2

If man Can walk on the moon he can farm the sea, say aquaculturalists. After years of research American sea farmers are beginning to back up this claim with practical results, as C. S. Monitor staff correspondent Peter Tonge shows below.

Acre of Sea Can Feed an Army

ONE Hundred Tons of Seafood from just one acre of ocean. That's the potantial of farming good estuary areas. By comparison, one acre of top-quality pasture can produce 100 pounds of beef; under optimum conditions perhaps 250 pounds. In any event, the ratio heavily favors the sea.

Hence a growing cry to farm our seas and rivers rather than just hunt them.

Experts involved in marine research agree. But they caution against too much optimism. Aquaculture, they warn, is unlikely to solve the world's food-supply problems all on its own. Just as only a small percentage of the land area is suitable for agriculture, not much of the sea-bed is suited to aquaculture.

For the foreseeable future, they point out, only the continental shelf areas, about 3 percent of the ocean, would be feasible for this type of farming venture. Still they insist that controlled fish and shellfish rearing can make a much more significant contribution to mankind's food requirements in the future.

Take the mussel, for example. Right now it's the champion meat producer of them all. According to C. P. Idyll, who heads fishery sciences at the University of Miami, an ecologically suitable area the size of New York's Long Island could produce three times as much mussel meat in a year as the entire world's present fish catch. That's over 230 million metric tons.

The Spaniards raise mussels in vast beds in the Bay of Biscay. French operations off the coast of Brittany are significant producers too. And all over Europe people relish this cousin to the clam.

Over on the far side of the Pacific Ocean the Japanese achieve similarly impressive results with oysters and are very advanced in experiments with scallops. The Chinese raise several species of freshwater fish, principally carp. On Taiwan, farmers display an efficiency in raising milkfish, a saltwater species, which has earned them worldwide recognition and respect.

In the United States, the catfish is the principal farmed eating fish, although trout is also big and pen-produced salmon is on the increase. And on the Isle of Man the British lead the world in flounder farming.

Other peoples with active aquaculture programs include the Russians, Koreans, and Israelis whose pond-raised fish are frequently a major crop of the Kibbutz.

Despite these and other efforts, the surface of acquaculture has "barely been scratched," say marine biologists, many of whom work on a "shoestring" budget. John Hughes, whose work at the Massachusetts State Lobster Hatchery on Martha's Vineyard has made lobster farming a probability, has just $4,000 a year, exclusive of salaries. to work with.

The Food and Agriculture Organization of the United Nations estimates that, even with present technology, production by aquaculture could increase the present harvest of four million tons a year three to five times. With greater knowledge it could increase 15 to 20 times.

Says Dr. John H. Ryther of the Woods Hole Oceanographic Institution : "If man can walk on the moon he can accomplish virtually anything. Give us (marine biologists) the money and we'll accomplish similarly great things."

The following three examples reflect this promise.

LOBSTER PLENTY

Here on Martha's Vineyard, just a 20-minute ferry ride from the mainland, John Hughes raises lobsters — exquisite powder blue and orange-red creatures along with the standard variety.

More important though is the recent breakthrough which has boosted lobster growth fourfold. In effect commercial lobster rearing now is a practical possibility.

Put another way, the "great Eastern American lobster famine" so freely predicted as beginning in the next decade should not come about. Lobster, selling in the more exclusive restaurants at better than $17 a plate, should be no more expensive than steak.

Twenty-two years of experimentation inside the two gray-shingled sheds that make up the Massachusetts State Lobster Hatchery has brought this about.

Stated very simply, warm water is the key. In standard sea temperatures of the northeast American coast, lobster take between seven and 11 years to reach one pound in weight. In his hatchery Mr. Hughes has cut this down to two years and, in some cases, to a mere 18 months.

Mating to hatching, once a two-year process, has been trimmed to 11 months. Another plus for warm water : A lobster needs only four pounds of food for a body-weight gain of one pound. In the cold waters of the Labrador current that ratio is 11-1.

Thus, as Mr. Hughes expresses it: "We have the biology (for commercial raising) in the palm of our hand. It's a design and engineering job from now on." By this he means that the need is to develop an efficient system that will automatically feed the lobsters, handle waste removal, control water temperature, and so forth.

"Four pounds of feed doesn't cost much," he points out. "What

(*Contd. on page* 12)

Mr. D. Rangaswamy, member, Incometax Appellate Tribunal, Madras, celebrated the marriage of his youngest daughter, Sow. Malathi with Chi. S. Ramanujan (S. R. Anujan), son of Mr. R. Srinivasacharlar, L.I.C., Madras at Sri Rajeswari Kalyana Mantapam, Edward Elliots Road, Mylapore, recently. Among the dignitories who graced the occasion was the Governor of Tamil Nadu, Mr. K. K. Shah, who is seen in the picture with the couple.

Elimination Of Poverty Strategic Objective Of Fifth Plan

Roughly between two-fifths and one-half of India's total population-over 220 million people-live below a per capita monthly expenditure of Rs. 20 at 1960-61 prices. Apart from the programme specially included in the Fourth Plan for the benefit of poorer sections, special schemes for increasing employment opportunities and welfare schemes have been introduced and expanded. In the Fifth Five Year Plan, elimination of poverty forms an important and strategic objective.

Since the beginning of the Fourth Plan and specially during the last two years special attention has been given to the implementation of programmes and schemes which are expected to directly benefit the poorer and the weaker sections. As the problem of poverty is ultimately linked with the level of productivity and the opportunities for gainful employment, the long-term development measures for achieving these have been supplemented by short-term specific schemes which can immediately help in improving the earnings and the living standards of the poorer sections. Again, as the problem is more acute in the rural areas and among the small farmers and the landless labourers, the development of agriculture and the schemes of employment for the benefit of these classes have been given utmost priority.

Various measures have been taken to facilitate greater participation of the small farmers in the development of agriculture and particularly in the adoption of the new technology. Various policy measures have been adopted to provide institutional support to them. The policy of public financial and other institutions, including those of nationalised commercial banks and the cooperatives, have been oriented in favour of the weaker sections. A scheme of differential interest rates has been recently introduced which provides for charging of lower interest rates on advances to smaller borrowers Steps have also been taken for the effective implementation of the programmes through the development agencies for the small farmers (SFDA) as well as for the marginal farmers and the landless labourers (MFAL). While the object of the SFDA is to provide access to those potentially viable through inputs, credit, services and supplies, the emphasis of the MFAL is on programmes of providing ancillary occupations such as dairying, poultry, piggery and sheep breeding.

Considerable stress is being laid on the early implementation of various land reform measures including lowering of ceilings on rural land holdings and the redistribution of surplus lands. State Governments are being particularly urged for making assignments of Government waste lands suitable for cultivation to landless labourers and also for effective steps for quick distribution of land to the landless and the landed poor. The implementation of integrated dry farming development projects is being given particular attention.

Similarly in the field of industry, various measures including cheaper credit facilities, arrangements for adequate supplies of inputs and extension of training facilities have been taken for the promotion of small industries. Measures are directed to increase reservation for small industries. Special concessions from the public financial institutions have been extended for the development of industries in the backward areas. The Industrial Licensing Policy has been modified with the objective of encouraging entrepreneureal activity. Rights to property are being abridged and amendments to the Constitution have been made to remove the legal hurdles in the way of socialist policies.

EMPLOYMENT OPPORTUNITIES

Special schemes for increasing immediately the employment opportunities and improving the living conditions of the poorer sections have been taken up. A crash programme with a provision of Rs. 50 crores for providing additional employment in the rural areas was initiated in 1971-72 and a provision of Rs. 25 crores was made in the Budget for 1971-72 for providing job opportunities for the educated unemployed. Special rural works schemes for the drought prone areas have also been taken up since 1970-71. In the Budget for 1972-73 a sum of Rs. 47 crores has been allocated for additional employment schemes including Rs. 27 crores for implementation of programmes to be taken up in the States and the Union Territories for the educated as well as uneducated persons. Programmes involving an outlay of Rs. 42 crores are being taken up by the States and the Union Territories during the current year. Further, to render direct assistance to the weaker sections to improve the quality of life, schemes for nutritional feedings, rural housing, rural water supply and slum clearance have been sought to be strengthened.

As the rise in prices particularly adversely affects the poorer sections, measures are being taken to strengthen the puplic distribution system. The public distribution of foodgrains has been strengthened and expended. The proportion of levy sugar has also been raised to 70 per cent in order to augment the supplies for the public distribution system A scheme for making available supplies of controlled varieties of cloth at reasonable prices were introduced recently. Under the scheme, the controlled varieties of cloth are to be distributed only through the cooperativa agencies, the fair price shops and the mills' retail depots. As part of the strategy of stabilising prices, the Government has recently decided to take over wholesale trade in wheat and rice-wheat, during the current rabi season itself and rice in the following season. Necessary measures for implementing the decision are being worked out.

FIFTH PLAN OBJECTIVES

Elimination of poverty forms a strategic objective in the Approach to the Fifth Five Year Plan. Besides laying emphasis on acceleration in growth, the Approach to the Fifth Plan envisages a direct attack on the problems of unemployment, under-employment and mass poverty. It, therefore, lays utmost importance on the expansion of productive employment opportunities-both wage and self-employment and raising their productivity. The rate and pattern of growth and the composition of output have been derived to subserve the social purpose. Composition of growth rates has been worked out in a manner which will enable the lowest 30 per cent of the population to attain a more satisfactory level of living. Besides it envisages the provision of a certain minimum standard of social consumption and investment in the form of education, health, nutrition, drinking water, housing, communication and electricity. For the purpose a National Programme for minimum need is envisaged. The details of the programmes and also instruments to be adopted in the Fifth Plan are being worked out.

Acrobatics

A Chinese acrobatic troupe visiting Washington has been given a red-carpet reception, reports the U.S. press. A performance given by them on January 10 at the John Kennedy Centre was attended by Secretary of State William Rogers, Under Secretary of State Kenneth Rash, the Senate floor leaders, Presidential Assistant Harry Haldeman, and other officials. Rogers personally read out a message of greetings from President Nixon and presented the leader of the troupe with a Chinese translation of the text.

On January 12 the Chinese acrobats visited Congress, where they were welcomed by House Speaker Cart Albert, and the Senate floor leaders gave a luncheon in their honour. The same day they were given an official reception by President Nixon in the White House. The President and the leader of the troupe exchanged speeches.

ON THE COVER

Kumari Vani

Kumari Vani, new entrant to the Hindi filmdom, is a gifted artiste. She is a student of the famous Sri Rajarajeswari Natya Kala Mandir of Bombay run by the renowned Bharatanatyam Guru, Sri Kuppiah Pillai (who is in his 80s) and his family. Vani with her equally talented younger sister, Meera, has travelled many countries in Europe and U.K. where she had thrilled thousands of westerners with her wonderful performance of Bharatha Natyam. Only recently she visited Madras and she won the applause of one and all here with her superb grace and inimitable abhinaya. She is undergoing her degree course in Bombay University. She stood second in the All-India Beauty contest. She had given several performances before visiting foreign dignitaries at the Govt. House Raj Bhavan Bombay and at Delhi. This charming, well-built, tall handsome dancing artiste is the daughter of Mrs. & Mr. K. N. Ganapathy, Merketing Officer of M/s. Geoffrey Manners of Bombay. Her mother, Smt. Indubala, is a great musician. Vani, we learn has been booked spontaneously by more than a dozen Hindi producers and she, another Tamilian girl, is sure to win great laurels in the Hindi film field as Vyjayanthimala and Hema Malini.

Radio Caroline Mutiny

Radio Caroline is the oldest and best known pirate broadcasting station operating in the North Sea. Some time ago it was taken over by a group of Dutch businessmen. By agreement with their country's government, the ship Mi Amigo with the station was anchored at the very edge of the Dutch territorial waters, close to Scheveningen, and the broadcasts in Dutch and English were resumed. Two days before New Year, however, SOS rockets were fired from the ship. The British members of the ship's crew had mutinied. The Dutch destroyer Limburg rushed to the rescue. Fortunately, the mutiny ended without any blood being shed. On January 3, newspapers reported that Radio Caroline was again broadcasting music and advertisements.

City Train Timings

With effect from Nov. 1

MADRAS CENTRAL

	Dep.	Arr.
Howrah Janata	8-40	19-15
Tatanagar Exp.	12-40	14-10
Howrah Mail	20-55	5-05
Circars Exp.	22-00	6-40
New Delhi Exp.	8-25	17-55
Hyderabad Exp.	13-35	10-15
Delhi Janata	15-10	15-55
New Delhi-Air-conditioned/Grand Trunk Express*	19-45	10-55
Dadar Express	10-00	17-15
Bombay Janata	13-40	14-00
Bombay Mail	21-50	5-15
Tirupati Exp.	7-00	21-40
Brindavan Exp.	8-10	19-05
Bangalore Exp.	12-45	15-20
Bangalore Mail	21-15	5-40
West Coast Exp.	12-25	14-45
Kerala Express	16-25	9-35
Mangalore Mail	20-20	7-00
Nilagiri Exp.	20-00	7-20
Cochin Mail	19-20	6-10
Gudur Pass.	8-45	22-50
Gudur Pass. (via Arkonam)	—	21-45
Vijayawada Pass.	15-20	12-40
Vijayawada Parcel Passenger	23-45	4-15
Raichur Pass.	9-25	20-10
Tirupati Pass.	17-00	9-45
Bangalore Pass.	6-05	21-00
Jolarpettai Pass.	11-20	14-20
Arkonam Pass.	18-10	—
Coimbatore Parcel Passenger	21-25	6-10

Janata Express—III Class only.

*This train will run as air-conditioned express ex-Madras Central on Mondays and Saturdays and arrive Madras Central on Wednesdays and Fridays. On the other days of the week, it will run as Grand Trunk Express.

MADRAS EGMORE

(MAIN LINE)

Rock Fort Express	9-10	17-10
Virudunagar Janata	13-40	7-45
Rameswaram Exp.	19-30	8-05
Tiruchi Pass	6-45	12-05
Villupuram Pass.	15-55	12-05
Trivandrum Pass.	21-30	5-20
Madurai Parcel Passenger	22-25	4-50
Shencottah Pass,	—	21-10
(CHORD LINE)		
Trivandrum Exp.	8-10	18 10
Tirunelveli Exp.	18-15	8-35
Trivandrum Mail	20-30	7-15
Pandyan Exp.	20-10	6-40
Tuticorin Express	21-45	5-40
Rameswaram Passenger	11-00	16-25
MADRAS BEACH		
Chingleput Pass.	17-07	10-40
Kancheepuram Passenger	17-33	9-50
Kancheepuram Passenger *	18-12	9-18

*Will run on all days except on Sundays.

Sunday service will be observed only on Madras Beach-Tambaram Electrified suburban section.

Janata Express—Third Class only.

V. V. S. Aiyar-45

By R. A. PADMANABHAN

"TAMIL GURUKULAM"

WHEN Aiyar came out of Bellary Jail, "Desabhaktan' daily had ceased publication. Without able editorial direction and saddled by a weak-kneed administration, the paper had met with an early end. Aiyar, therefore, had to seek new avenues for expending his abundant energies.

As soon Aiyar came out of jail, his wife and children who had been staying in nearby Tungabhadra Ashram, joined him. With them he went on a sightseeing tour to Hampi and Vijayanagar. A lover of history and fine arts, Aiyar was greatly fascinated by the artistic splendour of the two ancient towns.

After the trip, Aiyar went to Tiruchi and lived there for some time in the ancestral house in Varakaneri. He took active part in Congress work and became a Member of the Tiruchi District Congress Committee executive.

But his mind was bent on more solid national service and the running of a National educational institution was one of the two pet plans he had been having for some years now. The other one was to run a class monthly journal devoted to cultural and literary advance. In order or achieve both the ambitions, Aiyar went round looking for a suitable place to start his educational institutition which he proposed to name the "Tamil Gurukulam". The sites he saw in Kodambakkam (Madras), Mannargudi and Vennatrin Karai (near Thanjavur) were not to his satisfaction.

At this time Aiyar was asked to preside over a Congress conference in Koilpatti in Tirunelveli District. After the conference he happened to visit Kallidaikurichi, a small town in the same district. The staff of the Taluk Board School in Kallidaikurichi had, following Mahatma Gandhi's call for non-co-operation, walked out of the school, and later converted it into the "Tilak Vidyalaya", an institution imparting education on national lines. When Aiyar visited the place, knowing his interest in education, he was requested to take over charge of the Vidyalaya. Aiyar agreed and this school which was located in Ramalinga Aiyar Thottam in Kallidaikurichi became the nucleus for Aiyar's "Tamil Gurukulam." Aiyar started his Tamil Gurukulam as an adjunct of the Tilak Vidyalaya, and formed the Bharadwaja Ashrama to manage its affairs.

Although all the facilities and equipment of Tilak Vidyalaya became Gurukulam property, it was not yet possible to give full vent to Aiyar's dreams For the time being, all the teaching was in routine manner; the only change was that all resident students followed a strict discipline getting up early in the morning, washing their own clothes, doing prayer systematically and offering obeisance to the Motherland every day. The students often went out on excursions to the Kalyani Falls nearby and conducted swimming bouts in the Tamraparani River.

Aiyar was still seeking a suitable place for the Gurukulam and inspected many places in the vicinity. He was keen that the place should have beautiful natural surroundings which would inspire calm study. Such a place—three miles south of the Tamraparani River and a mile and a half from the railway station—came up for sale at that time. A fertile thiry-acre ground, with shady trees and, with the pleasing hills of Kolundia Malai a mile south, it was an ideal situation. The price too was tempting: only Rs. 3,000. But Aiyar did not have the amount to go ahead. He issued an appeal in the Press and, fortunately, a philanthrophist, Vayi. Su. Shanmukan of Kanadukaatthan in Chettinad, came forward and donated the money for the purchase of the land. On an auspicious day Aiyar moved into the new place in Shermadavi and the Tamil Gurukulam came into being in the manner envisaged by Aiyar.

Aiyar's idea was to make the Gurukulam meet most of its needs by itself. He was greatly inspired to follow the example of Booker T. Washington, the American Negro leader, whose life sketch Aiyar had earlier written in Tamil. A part of the grounds was devoted to rice cultivation; a part to growing pulses. Cocoanut trees and mango trees provided their fruits. A few banyan trees provided the shady atmosphere for open-air classes.

Cultivation was part of the daily curriculum. The students learnt agriculture by working in the fields. When new buildings had to be added to provide for the various needs of the School, bricks were made by teachers and students themselves, just as it was done in distant Tuskegee of Booker Washington. Improvements to existing sheds were done by the staff and students themselves, bringing sand to fill the floors, laying bricks and building walls, imposing thatched roofs and white-washing the walls. The cooking was also done by the Ashram inmates themselves, wives of some married members of staff helping in the work. It was a delightful co-operative colony, all persons living as members of a large family.

Aiyar provided a shed for housing his library and soon some three thousand books were lodged in it. A printing press was established shortly after with a treadle an Eagle press and types in English and Tamil. This was to be the press from which Aiyar's second dream, the Tamil monthly journal (which he named "Bala Bharati') was to issue some time later. The press also printed a second edition of Aiyar's "The Kural or the Maxims of Tiruvalluvar". All of Aiyar's literary works were turned over to the Bharadwaja Ashram, the managing body, and the income from the sale of Aiyar's books also helped to meet the financial needs of the Gurukulam.

Aiyar's objectives in establishing his Gurukulam was to create, in his own words, "a new race of brave Tamils" who would be educated, cultured and able to stand on their own legs without begging for jobs in offices. They were to learn a trade even while studying; they were to have practical experience of it. He wished his students to be rid of the petty habit of looking for a desk job; his Gurukulam was not to be another 'manufactory of clerks". "We must be men of heroic mould" was his constant advice.

The education in the Gurukulam was not aimed at teaching a trade or agriculture alone. Its objective was to teach Literature, philosophy, Fine Arts, Science, Geography, History. Medicine and all such knowledge as well. As an advertisement of the Gurukulam put it, "Teaching in the English language will be imparted preparing the students to equal the B.A. level. In Tamil, classic education including the Sangam poetry and Tolkappiam grammar will be taught. Student will be trained in European methods of scientific discovery. Mathematics, History, Sanskrit and Hindi the National Language, will also be taught. Among trades, spinning and weaving, carpentry and agriculture will be learnt by the students." As time went by and the Press got

(Contd. on page 10)

THE FAMOUS ASTROLOGER

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FUN AND LAUGHTER

ACCORDING TO ORDERS

He had found fault with his shorthand typist for altering a sentence in one of the letters he had dictated. Her reply was that she thought he meant what she had written.

"I don't want you to think," retorted the great man, sharply. 'I want you to take down my words accurately and then put them into type on the machine, neither adding nor leaving out anything I may say."

Later in the afternoon the typist brought back the following letter for signature:—

"Dear Smyth. Spell it with a y, although that's pure swank on his part of course. In answer to your letter of—Look up the date We can quote you—Tell me. Walter, what's the most we can charge this old blighter. Very well. We can can quote you £ 10 a ton for the goods free on board. If he accepts we shall have to make sure of our money beforehand, for I don't trust him. Awaiting the pleasure of your esteemed order, Yours faithfully."

* * *

HIS CLEVERNESS

A young barrister was speaking for the defendants in a civil action and his longwindedness was obviously boring the court. The leader for the plaintiff scribbled a note and passed it along to the talkative youth. He, however, did not read it immediately.

A frown wrinkled the judge's brow; he told the usher to pass up the message for his inspection. It was noticed that the writer of the note looked acutely uncomfortable at this order.

The judge read the message, folded it again, and passed it back to the young counsel.

"I think this note will be of interest to you," said his lordship, grimly. "It was to me."

The counsel opened the note and was astonished to read this message: "Sit down. Can't you see the old idiot is with you?"

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BOMBAY

MISSING

Bridget, the maid, approached her mistress. "Of would lorke a week's holiday Miss Eileen," she said. "Oi wants to be married."

Her mistress gave her a week's holiday, a white dress, a veil, and a cake.

At the end of the week Bridget returned.

"Oi, Miss Eileen," she exclaimed, "Oi was the most lovely bride. My dress was perfect, my veil lovely and the cake splended."

"Well, this sounds delightful," said her mistress. "I hope you've got a good husband."

Bridget's tone changed, "Now Miss Eileen, an'what d'ye think? The spalpeen never turned up."

Just In Case

One day when I was out walking with my grandfather, we passed a blind man seated on the pavement asking for alms (writes Sacha Guitry, the famous French actor, in his book. "Souvenirs"). My grandfather put his hand in his pocket and drew out four sous, which he gave to me, telling me to put them in the blind man's hat.

I dropped the four sous into the hat and rejoined my grandfather. After a few seconds had passed, he remarked: "You didn't bow to him."

"You mean the blind man?"

"Yes."

"But why should I have bowed to him."

"Because one should always bow to people when one gives them charity."

"But in this case," I protested, "since the man was blind......"

But my grandfather had an answer for everything. And now, as I think back, his answer seems to have been an especially good one. He said. "Yes, but supposing he was only pretending to be blind?"

RIGHT AND WRONG

A schoolmaster, trying to discover what his class of small boys knew of common objects, asked what it was that a horse was made to wear when it went about its work. The word "harness," which he sought for, was not forth-coming.

At last he said: "Is there any boy here whose father attends to horses?"

"Yes, sir," said the one small boy.

"Then tell me the class, Tommy, what your father puts on a horse every morning," said the master.

"Half a crown," was the prompt reply.

NAMING THE BABY

Proudly Mrs Missen exhibited the new baby to the first family gathering since it's arrival.

"What are you going to call he?" asked one grandmother.

"I'd like her to be called Ada, after her mother," suggested the child's father.

"I think Geraldina is sweet," murmured the mother, ignoring her husband's suggestion.

"Esmerida has haunted me ever since I read it in a book," chimed in a maiden aunt.

"To my way of thinking, Feodora is classically beautiful," asserted the other grandmother.

The father of the child had sat meekly and quiety through this discussion, but could stand it no longer.

"Excuse me," he said. "We're not trying to get a name for a fourpenny cigar, but for a child!"

* * *

DRIVEN FROM HOME

As the big car passed through the village the visitor saw a man sitting on top of a pile of furniture, looking very disconsolate. The visitor stopped his car and leaned out.

"I'm sorry for you, my poor man," he said, "having no roof over your head; perhaps this will help you," and he pressed a note into the man's hand.

"Thank 'ee", said the man. "Very kind of you. Oi'm sure."

"I hope things will be better for you soon," said the other.

"Oi'll be quite all right when she's finished," replied the man, jerking his thumb in the direction of a cottage door.

"Who's she?"

"Why, my wife; she is white washing the place."

* * *

EASY

The Colone an expert shot—had been challenged to a contest at the fairground shooting gallery by one of his officers.

Carefully sighting his rifle, the Colonel fired five times, and each time a ball fell from the water-spout.

Up stepped his opponent, and without any apparent effort brought down all five balls with only one shot.

"Amazing!" exclaimed the Colonel. "How d' you do it!"

"Easy," was the answer. "I shot at the man who was working the water pump!"

* * *

The minister was inquiring of one of his flock why he had not attended church recently.

"Well, you see, sir;" said the man, "I've been troubled with a bunion on my foot."

"Strange," said the parson, "that a bunion should impede the pilgrim's progress."

When It Comes ..

A college professor had departed from a hotel and, when a few blocks away, realized that he had left his umbrella. Returning to the hotel, he learned that a newly wedded couple had taken the room.

As he approached their door, he heard a kiss from within, and the groom said;

"Whose little mouth is that?"

"Yours," she cooed.

"And whose little neck?" he asked kissing again.

"Yours, of course, sugar-plum," she replied.

"And whose 'ittle hands?" kissing them.

"Yours, all yours," she murmured.

"Listen here you folks!" the professor demanded through the door, "when you come to an umbrella, it's mine."

THE JOKE

Two inmates of a deaf-and-dumb institution had an argument, and when the official in charge came round to smooth over the row one of the mutes was standing with his back to the other, laughing his head off.

Said the official, speaking on his fingers: "What's the joke? And why is Smith looking so fierce?"

"Oh," signalled back the mute, "he wants to swear at me and I won't look."

* * *

THE DIFFERENCE

"Ah, so you are the man who is giving my wife lesson in elocution," said the long-suffering husband. "What kind of a pupil is she?"

"I find her very apt, to say the least," answered the teacher.

"Strange," came the reply. "I find her very apt to say the most."

All Seven

Mercelle Praince, a French actress, tells this story: "Yesterday, for the first time, a friend of mine took me to the dog races. The night before I had had a strange dream: I dreamed I saw a golden blaze appear in a clear sky, and within it was the number seven, guarded by an angel on each side.

My friend, who lives in another city, called for me in company with seven other people. We left in a carriage drawn by seven horses. Our ticket of admission was 7777. And when we arrived seven dogs were running in the seventh race.

"Natu ally, I played the number seven seven times.

"Do you know what happened? I'll give you just seven minutes to guess.

"My choice came seventh."

The Story Of Central Excise

AS a levy either in the shape of a toll or tax, excise has been collected in India from ancient times. Duties on liquor and salt were prevalent during the Mauryan period; in later periods of Indian history the field of levy was expanded considerably. Even though in concept and mechanism for collection, the historical references reveal a remarkable similarity with the modern times, the beginnings of the excise system in India, as it is understood today, can be said to have been made in 1894 when a duty of excise was levied on cotton yarn of finer counts. This was designed to improve the competitive position of Lancashire cloth in the Indian market. Two years later this was replaced by a duty on Indian mill-woven cloth which, however, was withdrawn in 1925.

In 1917, duty was levied on motor spirit fo lowed by a duty on kerosene and several other commodities. Immediately before independence we had excise on motor spirit, kerosene, sugar, steel ingots, matches, mechanical lighters, tyres, numanufactured tobacco, cigars and cheroots, vegetable product, coffee and tea. These duties yielded during 1946-47 a revenue of Rs. 50 62 crores (including the salt revenue of Rs. 6.92 crores) representing 14.6 per cent of the total tax revenue of the Government of India.

Until 1938, the administration of excise levies was left in the hands of Provincial Governments and the Princely States. However, with the growth of industries and the extension of the field of taxation, the need for a central organisation was keenly felt. In 1938, a department of Central Excise was created and added on to the Salt Department which was already in existence as a separate department of the Central Government. Every time a commodity was brought under excise, the Legislative Assembly passed a self-contained law and framed distinct rules for collection of duty. The method of collection followed differed from commodity to commodity but generally speaking duty was realised after the goods produced had been cleared. In 1944 all these enactments were consolidated into a single law known as the Central Excises and Salt Act. 1944. At this stage, the earlier mode or pattern of collection (i.e. payment of duty after clearance of the goods) came to be replaced by prepayment of duty accompanied by physical control on all operations of production and clearance.

Since independence the growth of excise duties in India has been phenomenal. The Taxation Inquiry Commission (1953-54) had concluded that for financing our Five-Year Plans, increasing reliance would have to be placed on revenue from indirect taxation, notably excise duties. For one the levy of excise duties at the production point itself not only facilitates collection but lends itself more readily tc rapid expansion than direct taxes; and for another excise duties have the merit of providing planners with a degree of latitude which no other source of revenue can. Accordingly, the coverage of excise duties has expanded substantially. This would be evident from the fact that as against 14 commodities (including salt) which yielded a revenue of Rs. 50 crores in the year immediately preceding independence, the Excise Tariff now covers some 120 commodities with a revenue potential of nearly Rs. 2,450 crores—over 56 per went of the total tax revenue of the Central Government.

Apart from raising revene, excise duties have been increaoingly used for achievement of scio-economic objectives, albeit in the narrow sphere of the commodities affected. For example, excise duties have been employed to (i) protect goods produced by the village and small-scale sectors, (ii) augment exports with a view to earning foreign exchange; (iii) restrain consumption of goods which are scarce to economise on imports, (iv) maximise production by schemes of special rebates etc., (v) conserul scarce resources like soft wood used for matches;

(*Contd. on page* 8)

THUS SPAKE THE MAHATMA

Let our first act every morning be to make the following resolve for the day : 'I shall not fear anyone on earth. I shall fear God only ; I shall not bear ill-will towards anyone I shall not submit to injustice from anyone. I shall conquer untruth by truth and in resisting untruth I shall put up with all suffering'.

ASOKA SCENTED BETEL NUT POWDER

Free India

SUNDAY Feb. 18, 1973.

NOT AGAINST P. M.

The Prime Minister's offer to step down if it could solve the problem of Andhra Pradesh is just uncalled for.

Nobody has asked for her resignation.

One is also not able to understand her appeal to the separatists to sit together and decide how the problem could be solved in a democratic way.

The separatist leaders of both Andhra and Telengana have held a joint meeting and have categorically stated that bifurcation is the only solution.

If the Prime Minister is not satisfied with this unanimity of opinion in the region, the simple alternative—and that is a real democratic alternative—is to hold a referendum in the entire Pradesh.

Bifurcation is sure to create unhappy situations in some other States. But if separatist demands in those States are reasonable why should Delhi be afraid to face them ?

The immediate sufferer of the A. P. restlessness is Tamil Nadu. So we are interested in a quick solution to the problem.

May we therefore appeal to the Prime Minister not to stand on false prestige and allow the Andhras to divide and live in peace ?

India Fights The Biggest Drought Of The Decade

INDIA has been facing conditions of drought in one part of the country or the other almost every year. But since the last big droughts of 1965-66 and 1966-67, the impact on the over-all food production was of not much consequence and through improved agricultural practices the production of foodgrains increased from 723 lakh tonnes in 1965-66 to 1,078 lakh tonnes in 1970-71. The country was also able to build up a sizeable buffer stock and the import of foodgrains was stopped. But the erratic and deficient monsoon this year led to the biggest drought in the last decade. Out of 340 districts in the country 230 districts and out of a total population of 56 crores over 20 crores have been affected. The drought also resulted in a loss of 1 0 tonnes of foodgrains. Besides commercial crops,particularly groundnuts suffered heavily.

THE CHALLENGE

To provide relief to the areas stricken by the drought, some for the second and third year in succession, was a big challenge. Large sections of the population had to be supplied food drinking water and fodder and the employment opportunities had to be created for the vulnerable and hard-hit sections of the society.

To meet the situation, the Emergency Agricultural Production Programme was launched and a sum of Rs. 150 crores was earmarked to be given to States for undertaking minor irrigation and similar other schemes which will not only help to meet the current situation but will also add assets of a permanent nature. Besides, schemes like the Drought-Prone Area Programme, Crash Scheme for Rural Employment, SFDA (Small Farmers Development Agency) and MFAL (Marginal Farmers and Agricultural Labourers), etc. were also pressed into service for providing employment and the opening of relief works, wherever necessary.

By the end of July, 1972, the number of relief works was about 32,000 and 20 lakh persons were employed. This increased to 82,000 works employing about 42 lakh persons by December, 1972. Although distribution of gratuitous relief was discouraged, yet to minimise human suffering gratuitous relief was provided under which, the total number of beneficiaries was about 25 lakhs in September, 1972. But after the harvest season started, it came down to 3.36 lakhs in January, 1973. Under the free-feeding programme, the number in October, 1972 was 31 lakhs, which declined to 16 lakhs in January, 1973.

Special efforts were made to supply drinking water to the drought-affected areas and to reach fodder for the cattle.

Voluntary agencies have also made sizeable contributions towards the free-feeding programme distribution of nutritious food, arranging fodder supplies, etc.

The Central Government have made commitments of the order of Rs 442.84 crores to meet this drought situation which is unprecedented and is indicative of the Government's determination and will to relieve the distress of the people and to provide relief to them.

COTTON—THAT CLOTHES MILLIONS

India has an area of about 80 lakh hectares under cotton, which is the highest in the world. During the last 20 years the yield of cotton per hectare has increased from 87 kg. per hectare in 1950 to 123 kg. in 1970. In the Punjab, the average yield of cotton is around 370 kg. per hectare

With the aim of developing better varieties of cotton having a higher yield, long staple and better fibre, the Indian Council of Agricultural Research sponsored an All-India Coordinated Cotton Improvement Project in 1957. Since then, a number of new varieties of cotton were released, the latest being Krishna, MCU-5, Khandwa-1, Sujata, G-27, Bharathi, Hybrid-4, GS.23 and Varalakshmi. Some of these varieties, like MCU-5, Sujata and Hybrid-4, have brought about a major breakthrough in cotton cultivation.

By the end of the Fourth Plan, the cotton requirement of the textile industry in India, which is the second largest in the world, has been assessed as 80 lakh bales and by 1993-94 it may increase to 122 lakh bales. The production of cotton in 1971-72 is estimated at 65.3 lakh bales which is an increase of about 45 per cent over the last year's production of 45 lakh bales.

To meet this growing demand of cotton, the rapid expansion of area under Hybrid-4 was taken up on account of the high yield potential of this variety. From 4,000 hectares in 1969-70, the area is expected to increase to 2,03,000 hectares by 1972-73. This will further double by 1974-75.

COWS OF TOMORROW

"Karan Swiss" is the new strain of cattle, that has, deen evolved at the Nation Dairy Research Institute, Karnal by crossing imported frozen semen from outstanding progeny-tested Brown Swiss bulls and Sahiwal and Red Sindhi Indian cows. This new strain has heavier and healthier calves at birth, grows faster and matures early. It gives a milk yield of about 3,200 litres per lactation as compared to 1800 litres of an average Indian cow.

THE POOR MAN'S PUMP

It may sound unbelievable that an ordinary bamboo boring

(Contd. on page 7)

Letter To The Editor

Nobel Prize For Nixon ?

Sir,

Many a reader might have raised their eyebrows when they read in newspapers the reported announcement made by the Director August Schon of the Nobel Institute of Oslo that the Nobel Peace Prize Committee has accepted the nomination of the US President Richard Nixon as "a qualified Peace Prize Candidate".

When the Nobel Committee allows itself to be drawn into an unseemly game as selecting many undeserved people in the past, it is no wonder that the Committee has accepted the name of a person who was responsible for many tragic events in this world.

Mr. Nixon's contributions to the cause of peace have been that he supported Yahya Khan when he committed genocide in Bangla Desh; he also shared the major responsibilities in committing genocide and ecocide and many unspeakable crimes in Vietnam. He had conducted the dirtiest war ever waged in the American history.

Though the war in Vietnam has ended it was not because of Nixon's desire for peace but because of his defeat in this war and also because of the world-wide criticisms levelled against him for conducting the criminal war in a small country. And the bitterest critics of Nixon were his own people, press and public organisations.

Now that the President has started talking in terms of peace. a "generation of peace" and to achieve this his present cabinet has also been named a "peace cabinet".

But the question is at what price peace has been "achieved" in Vietnam ? Can any one forget the trials and tribulations that were undergone by the heroic people of N. Vietnam ? Was it necessary for President Nixon to conduct the war in this most boorish and brutal manner to achieve the peace which he now claims, would lead for a "generation of peace" ? The Prime Minister the other day rightly said while addressing the "One Asia Assembly" in New Delhi that, whether this sort of war or savage bombing which had taken place in Vietnam would have been tolerated for so long, had the people been European.

However much Nixon may talk about peace, as the saying goes, "Treachery lurks in honeyed words". Though the war in Vietnam is over now, its consequences will linger as one of the most terrible memories of the 20th century.

V. K. Ravindran

Madras-14

Instant Space Communication System Comes of Age

By S. L. DHINGRA

INDIA observes February 13 as the anniversary of its debut in commercial space communication. It was on this day two years ago that the country, using a satellite orbiting hundreds of miles above the Indian Ocean as a microwave relaying station, exchanged signals with an earth station in England.

This year, February 13 has an added significance, not only for India but for 82 other countries as well, as the day promises to open a new pathway to instant global communication.

On that day, INTELSAT (International Telecommunications Satellite Organisation) will become a permanent international body with headquarters and a secretariat in Washington. This will replace the interim arrangements, existing since 1964, under which a privately-owned organisation COMSAT (Communication Satellite Corporation), has acted as the overall manager of INTELSAT.

COMSAT will, however, continue as operational and technical manager for six years after which the Director General of INTELSAT will assume full managerial responsibilities.

This arrangement has become possible as two-thirds of the 83 member states have now ratified the agreement signed in Washington in August 1971 providing for a permanent international organisation for INTELSAT. India is among the 54 countries which have ratified the agreement.

In a statement on December 15, when Jamaica became the 54th member-state to sign the instrument of accession, President Nixon said: "This unique multinational venture for the peaceful uses of space has consequences ranging far into the future. We can now look forward to the day when nations around the world will be linked together for instantaneous communication. The implications of this development are enormous, presaging improved international relations in the political, economic, cultural, and scientific spheres."

Thus, eight years after the first communications satellite, "Early Bird", was launched by the United States and Europe, the revolutionary system is at last acquiring a permanent home of its own.

The communication satellites serve as microwave stations in space, relaying telephone, teletype, television and other communications traffic between earth stations thousands of miles apart.

Scientists believe that INTELSAT satellites and earth stations will soon help many countries, particularly in Asia and Africa, to leapfrog a whole era of technology and go straight into the space age.

INTELSAT's growth has been phenomenal: from a membership of 11 partner-members in 1964 it has today risen to 83 with 55 earth station sites in 49 countries.

From the one television channel and 240 telephone circuits of "Early Bird", the system has developed into a four-satellite network that can handle more than 20 colour television channels and over 10,000 two-way telephone circuits simultaneously.

China used the INTELSAT system in 1972 during President Nixon's visit there, and has signed contracts for three US-made earth stations. The Soviet Union also used INTELSAT during President Nixon's visit to Moscow and other cities.

The Apollo-11 moon walk in 1969, the world cup soccer matches in Mexico in 1970, the celebration of the 2,500th anniversary of the Persian empire in Iran in 1971, and the investiture of Prince Charles of England—all are among the events seen "live via satellite."

In fact, the rate at which space communication technology is developing, the day is not far when the science fiction of yesterday will be transformed into the scientific facts of today.

Dr. George E. Mueller of the U.S. National Aeronautics and Space Administration (NASA) recently said; "The use of such satellites as an educational tool will lead to one of the greatest breakthroughs in mass education in history, bringing vast new knowledge and information to literally millons of people.

"If made available to the governments of the developing nations, these satellite could be used not only for educational purposes in the traditional sense but also for instruction in such areas as health and sanitation; crop and animal husbandry; construction of bridges, roads and houses; and a myriad of other fields."

Dr. Mueller also envisioned a medical doctor in a remote region of the world with few diagnostic facilities at his disposal, "calling" in a patient's symptoms via satellites to a computerized data bank at one of the world's great clinics. The doctors at the clinic could diagnose the illness and advise their colleagues—perhaps half-way around the world. The quality of medical care afforded to millions of people throughout the world could be enhanced by such a use of communications satellites.

Thus, the world stands today at one of those unique moments in history when through the advancement in science, technology and education, civilisation is on the threshold of a major step forward. Space communications will contribute in no small measure to such a breakthrough.

India joined INTELSAT as far back as 1965 as it was quick to realise the potential benefits of becoming an active partner in sharing the advanced satellite communications technology. The new technology is already helping India transform its telecommunications into one of the most effective and modern in Asia.

While INTELSAT is responsible for the design, development, construction, launching, maintenance and operation of the satellites, earth stations for transmitting and receiving communications traffic to and from the satellites are the responsibility of the member-states.

Accordingly, the Indian government entrusted its Department of Atomic Energy in 1968 to build an earth station at Arvi, near Poona. The station, which became operational on February 26, 1971, is under the administrative control of the Overseas Communications Service (OCS), the Indian government agency that connects India with the rest of the world.

Since the commissioning of the Arvi earth station, two years ago, India is now directly linked with seven countries and, through their earth stations, with several other countries including the United States.

India is already negotiating with INTELSAT to establish a direct satellite link with the United States. This would become possible when a satellite is located at O degree meridian

The present arrangement of satellite communication between India and the USA is through the Goonhilly earth station in England and the trans-Atlantic submarine telephone cable between England and the United States.

The Arvi station has been planned to provide all forms of international telecommunication facilities including telephone, telex, telegrams, radio photos and data transmission. Additionally, the station can handle television programmes whenever relayed via satellites. With the Indian television network expanding, it is expected to make greater use of this facility.

Since the introduction of satellite services in India, telephone traffic has recorded a growth of 300 per cent. Nearly 90 per cent of all calls from India now use the satellite channels. Similarly, the number of voice, phone, telex, telegraph and leased teleprinter channels, operated through the Indian Ocean satellite, has recorded a phenomenal increase.

The satellite tie-up has resulted in the cost of telephone calls to and from the United States being reduced by 25 to 50 per cent in most countries including India.

In order to meet the need for diversification of transmission facilities as well as the demands of growth, the Indian government is building a second earth station near Dehra Dun, which will be ready for commercial operation by mid-1974. This second station will serve the northern region of India and also supplement facilities provided by Arvi.

When the semi-automatic, international satellite telephone exchange comes into operation in Bombay in the near future, OCS operators will be able to dial directly to subscribers in many countries. The ultimate goal is a direct person-to-person dialling from India to other countries. When this happens, the world would literally be at one's finger tips.

From page 6

can produce 4,500 gallons of water an hour. The cost is also very low—around Rs. 200 to Rs. 300 only.

Made of indigenously available material, bamboo boring has proved successful in areas with water table between 20 to 50 feet with a life of 4 to 5 years. Bihar Government has sanctioned Rs. 1 crore for bamboo borings and a target of 30,000 borings fixed. Over 20,000 bamboo borings have been installed already and more are coming up. A subsidy of 25 per cent is made available by the Small Farmers Development Agency, Purnea and a loan of Rs. 300 is advanced for each boring which when used with a diesel pumpmatches the performance of a 4" tubewell.

AN ENTERPRISING HARIJAN FARMER

Shri Narayudu, a Harijan of village Tallavalasa, Srikakulam district in Andhra Pradesh, was a daily wage labourer 10 years ago, earning about Re. 1 to Rs. 1.5 per day. Even after the allotment of a plot of 2.7 acres under the scheme of distribution of land to the Harijans, his earnings were low as the crop was often effected by drought. He has now sunk a well for which Rs 2,000 was sanctioned to him by the Small Farmers Development Agency of the area and he made progress. Impressed by his enterprise and performance, his field has now been taken up by the Agricultural Department as a demonstration plot. After getting the plot he was able to educate his first son, who is now working in a printing press and he wants to give good education to his second son too, which was otherwise not possible.

Identical Years

The Edinburgh Consumer Group has drawn the attention of its members to the fact that the calendars for 1962, 1973 and 1979 are in every way identical. This year, for instance, you can use the 1962 calendar, if you have kept. And if you've already bought one for this year, save it until 1979. It will come in handy.

From page 5

Staff in Central Excise Collectorates

	Gazeteed	Non-Gazetted Executive	Ministerial	Class IV	Total
1948	124	2382	2207	4008	8721
1955	373	7849	4421	11529	24172
1963	552	12935	6409	12315	32211
1971	2109	12260	7764	10287	32402

and (vi) prevent unemployment by prohibitive levies like the massive duty on biris made with the aid of machines.

Extensions in coverage, whether for the purpose of raising greater revenues or for economic regulation, have led on the one side to a continuous increase in the administrative burden on the Excise Department and, on the other, to numerous practical difficulties in the day-to-day administration of excise levies both for the trade and the administering agencies. These difficulties have had to be tackled from time to time through several innovations.

In 1954, when duty was imposed on art silk fabrics, it was felt that it would not be administratively feasible to bring under full control the large number of small units producing these fabrics a year later the same difficulty was felt in relation to cotton fabrics when exemption available in the case of units without a spinning plant was revoked. This led to the introdution of what are known as 'Compounded levy Schemes' under which the producer discharges his duty liability by paying a lumpsum amount determined with reference to the equipment employed by him. In subsequent years some other commodities have been brought the scope of these schemes.

With expansion of the tariff year after year, criticism came to be voiced by the trade that the system of collection based on physical control was interfering with the manufacturing processes and was irritating to the producers. In 1962 the Central Board of Revenue assumed the power to allow any manufacturer to deliver his goods without the normal physical checks and, in pursuance of these powers, introduced a special procedure commonly known as 'Audit type of control' for manufacturers of certain specified excisable goods. The procedure was, however optional and could be availed of only with the approval of the department. The salient features of this procedure were that the producer would keep a number of records, maintain a personalledgeraccount with the department with enough credit to cover the duty liability goods intended to be cleared, issue a gate pass or some other document for each clearance taken by him and submit certain periodical returns.

Despite these special procedures designed to reduce calls on manpower, the expansion in coverage of excise levies has been so extensive that the administrative organisation has had to be enlarged year after year. The following comparison illustrates this:

Even though the staff has expanded substantially over time, the cost of collection of Central Excise duties in India is the lowest of all the revenue departments, being only 0.77 per cent in 1970-71.

With such rapid expansion, the need arose for strengthening higher each ions and a new Central Excise Class I service was constituted with effect from 1—7—1955 as a wing of the Indian Revenue Service. This was, however, merged with the Indian Customs Service with effect from 15—9—1959 and as recommended by a reorganisation committee, separte Boards for Direct and Indirect Taxes were constituted on 1—1—1964.

In 1968, a major innovation called the S.R.P. (Self Removal Procedure) was introduced. Under it, excisable goods can be cleared by the psoducer himself without the necessity of a Central Excise officer being present for either assessment of the goods or for allowing clearances. The duty liability of the goods intended to be cleared is determined by the assessee himself on the basis of approved classification and price lists and is discharged through a debit entry in a personal ledger account which he is obliged to maintain with the department. In essence it is an 'Audit type of Control'.

In view of the increasing importance of excise duties in the general scheme of taxation and in the field of economic regulation, Government are constantly reviewing the existing laws and procedures for levy and collection in order to adapt them to the changing situation. Even the S.R.P. scheme which was introduced in 1968, is currently under review by a committee.

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Dangerous Astrologers

Indonesian security chief General Sumitro has forbidden newspapers to publish astrologers' predictions of a political nature so as "not to alarm the public". One of these astrologers, Professor Teuku Sjahriar Mahjudin, predicted, for instance, that several Indonesian generals would die in 1973 and advised President Suharto to postpone his visit to Europe because "it will bring him ill-luck".

A Karelian Folk Tale

How The Czar Was Taught A Lesson

ONCE upon a time there lived a czar who loved to listen to fairy tales. He sent his servants to the four corners of his empire to look for story-tellers. for he had to have a new tale every day. If he was told a story he had already heard, he ordered the story-teller's head cut off. And how was one to know whether the czar had heard a certain tale or not? So heads were rolling every day.

The time finally came when no one dared bring the czar a new tale lest he had already heard it. The czar's servants had run their legs off looking for a storyteller, but no one wanted to lose his head.

The czar then said to his servants: "If you don't bring in a storyteller, I'll have all your heads chopped off."

And then, quite unexpectedly, a bold and reckless fellow turned up and volunteered to tell his dear czar a fairy tale.

The czar was so happy, he himself brought a chair for the young man.

"Go ahead, my boy!"

And the young man began: "This happened a long, long time ago, when my grandfather and your grandfather were building a barn together. It was such a long barn that a squirrel running along its lengthwise beam hardly managed to cover the distance from one end to the other in a single day. It was an awfully long barn. Have you ever heard the tale?

"No, I haven't," the czar admitted.

"Well, since you haven't, that will do for today," the young man said. "I'll be back tomorrow."

When he came the next day the czar again offered him a chair. He was burning with impatience: "Come on, continue with the tale."

So the fellow went on: "Remember the barn my grandfather and your grandfather built together? Well, they bred a bull in that barn whose horns were so widely spaced it took a swallow a whole day to fly from one to the other. Have ever heard that one?"

"No, I haven't," the czar said.

"Well, sinee you haven't that will do for today," the young man announced. "I'll be back tomorrow."

"And again he left. "Well," the czar thought to himself, "you're a crafty one, but I'll outwit you! I'll have your head anyway!"

The next morning the czar summoned all his dignitaries and told them, "When that fellow shows up today to continue his tale, join me and listen. And remember, no matter what he says, you all declare in union that you have already heard it."

The young man showed up on the third day as he had promised. This time the czar didn't rush out with a chair for him.

But the lad began: "When your father and my father were ruling neighbouring countries, your father borrowed from my father forty kegs of gold, which he carried off on forty horses. Have you heared that?"

Remembering the czar's order. the courtiers cried out in chorus, "We have!"

"Well. if you have," the young man retorted, "then repay the debt, Sir!"

There was nothing the czar could do, everybody had confirmed the fact that he was a debtor, and he had to return the gold. So he began collecting all his gold, scrapping out the entire treasury, but only managed to fill one keg.

The young man took off with the gold, and the czar has since lost his taste for fairy tales. That's how the sharp fellow taught the czar a lesson!

Super-Suite

The owner of the Holiday Inn at Faithersburg (Maryland, U.S.A.) advertises the most luxurious and expensive suite in the world It consists of three rooms, four bathrooms, one cedar-panelled Finnish bath and a spacious Roman bath. A special maid plus a limousine with a chauffeur goes with the suite, which, together with food and drinks, costs $1,400 a day. So far no one has taken it, but the owner is not disappointed. He is making quite a lot of money because some 40 people engage ordinary rooms (at $19) just to take a look at the super-suite.

Better Late Than Never

Mabel Fitzgerald has at long last got her diploma certifying that she is a graduate of Oxford University. "Better late than Never," said Miss Fitzgerald, who recently celebrated her 100th birthday. She completed her studies about 80 years ago, but Oxford did not issue diploma to women in those days.

* * *

Art Lover

Some time ago Italian police arrested a thief who specialized in stealing paintings. Imagine their surprise when they learned that his name was Michelangelo Buonarotti, the same as that of the famous Italian painter.

Muscovite's Diary

Ivan Ivanov

SECOND WORKING DAY OF LUNOKHOD-2

THE second working day for Lunokhod-2, the Soviet automatic vehicle surveying the surface of the moon in the Sea of Serenity, has dawned and the vehicle was roused from its slumber on February 9 to resume its duties. On command from earth, it unfolded its solar battery panel and took only 20 minutes to start up. It will continue its exploration for two weeks which will be day-time where it is functioning.

At present the temperature in the instrumented compartment of the moon car is plus 22°c and pressure 788 mm of mercury column.

During the long lunar night, the ground control centre carried out several communication sessions with it to check its onboard systems. On January 29, the ground control found the temperature at the end of the rod which has sensors of a magnetometer fixed on it, dropped to—183°C. This is the first time that such a low temperature was registered near the lunar surface. This is all the more interesting because the temperature of the wheels of the car never dropped below – 128°c.

In a regular session of Radio communication with the Lunokhod-2 on February 8, the panel of the solar cells was opened and the automatic vehicle's readiness to continue the scientific research was checked.

* * *

THE NEXT PEACE CONGRESS

Soviet people are following with keen interest, every bit of news about the World Peace Congress to be held in Moscow this year. Mr. Romesh Chandra, General Secretary of the World Peace Council said in an interview the other day that this year's congres is going to be different from all the previous congresses. "A great number of international, regional and national organisations with most diverse views and programmes will take part in preparing for the Congress. They include the United Nations and the organisation of African Unity, the World Council of Churches, the Women's International Democratic Federation, Trade Union, Youth, religious and pacifist organisations and anti-imperialist movements", informed Mr. Romesh Chandra. Representative of these organisations have been invited for preliminary consultations to be held in March this year he said.

He further added that the World Peace Council will continue watching closely the observance of the agreement on ending the was and restoring peace in Vietnam. The delegation of the Council visited the DRV (Democratic Republic of Vietnam) soon after the signing of the document and saw the consequences of the US bombings. 'The World Peace Council urges all national organisations to join the campaign for helping the heroic cities of Hanoi and Haipong. The movement of solidarity with the Vietnamese people must continue and become more intensive" said the General Secretary.

The World Peace Council will also concentrate on strengthening the solidarity with the national liberation movement in South Africa. A world-wide week for this purpose is to be observed in May this year.

* * *

STUDENT WORK-SIMPLE AND SPECTACULAR

Work done by Soviet student work teams last summer included, apart from more spectacular jobs, the installing of telephones on remote farms and relief stewarding on holiday trains.

They laid power transmission lines and prospected for oil and natural gas in Western Siberia and Central Asia.

The student work movement began in 1958 when Moscow University students organised a party to helf open up the new lands in Kazakhstan.

There were only 339 in that first group, but last year 526,000 took part.

It is, however, skill, not numbers, that counts. Long before the vacation starts, students begin training for the jobs they are going to do.

They learn bricklaying, conceting, carpentry, painting or whatever the job they have chosen requires.

Others, of course, do jobs for which their own studies equip them.

The whole nature of vacation work has changed over the years.

The students on those first new land expeditions had nothing more technical to do than knock up prefabricated houses.

But last year students undertook skilled and complex work at the Kama Motor Works, on dams and power stations.

They coped with sluices and pumping equipment for the rice fields of Krasnodar, the Maritime Province, the Kara-Kum canal and so on.

A hundred medical students and student doctors gave good service not only to fellow members of students teams, but also to the local populace wherever they went.

Another valuable feature of student vacation work is the way it brings together and fosters friendship between the many different Soviet nationalities.

Students from Georgia and Moldavia, lush fruit and grape-growing areas, went to the wide-open spaces of Kazakhstan.

Ukrainians from the sunny south went to Tyumen, oil country in the heart of Siberia.

Students from the Baltic republics worked in the Tomsk area, on the Siberian steppes.

At Gagarin—birthplace of the world's first man in space—there was a building team made up of students from five Soviet republics.

Six thousand or so foreign students also took part in the 1972 vacation work season — another contribution to international understanding and friendship.

* * *

THE COST OF RUSSIAN WINTERS

On a winter's day in Yaroslavl not much more than a hundred miles north of Moscow, the temperature inside and outside your house can differ by 58 degrees centigrade.

The Russian winter is a costly business, and has to be treated with respect.

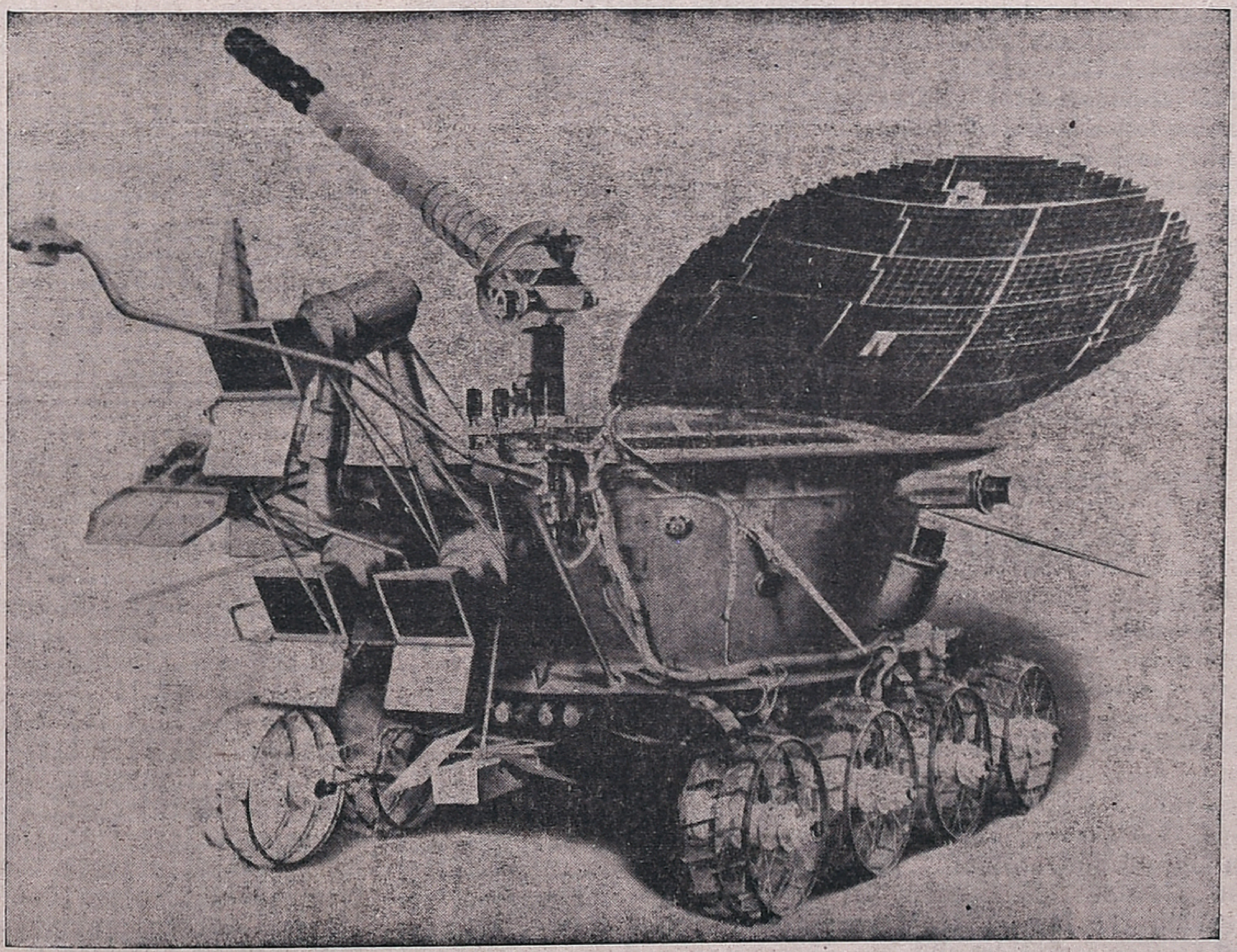
Each autumn, they told me at the local council, special commissions check on the way the plans to cope with winter are being carried out. They investigate the preparedness of every district, every enterprise and dwelling house.

At the Yaroslavl Tyre Plant I was shown the director's orders on preparations for the winter. Next to his signature stands the signature of the chairman of the Plant's Trade Union committee.

Preparations for the winter is an indispensible item in the collective agreement between union and management.

On the insistence of the Trade Union organisation, for example all the shops have been joined by closed in galleries, and you can now make your way to any

(Contd. on page 12)



Lunokhod-2

Carnatic Music, Computers And Colgate University

By MALINI SESHADRI

IF you wanted to know all about a musical composition of the great saint-composer Thyagaraja, where would you go? Whom would you ask?

A few years from now, the answer will be—you ask a computer!

The entire credit for this novel and imaginative idea should go to Dr William Skelton, Professor of Music at Colgate University, who is an ardent lover of South Indian Carnatic music. His project—to set up a computerized catalogue of Carnatic music at Colgate University—was received with admiration and enthusiasm by his music-loving audience at the Madras Music Academy recently.

What led Dr. Skelton to become involved in the musical tradition of South India? The story begins in New York ten years ago.

A friend asked Dr. Skelton to deliver a lecture on Indian music at a neighbouring college. "I read a few books on the subject" recalls Dr. Skelton, "and I gave the world's worst lecture!" That was when Dr. Skelton resolved to make a serious study of India music.

He came out to India in 1963 under the sponsorship of the American Institute for Asian Studies. Almost immediately he was drawn to Carnatic music which its rich traditions and to South India. Madras has become his second home. Speaking for himself and his family, Dr. Skelton says, "It is hard to tell whether we're only Americans or Madrasis too. We try to come 'home' to Madras each Christmas."

Over the years, while Dr. Skelton was being initiated into the intricacies of Carnatic music, while he was learning to sing and play the veena, Mrs. Skelton too was making herself at home in her own way. The result—a splendid cook-book on the festival dishes of South India, including the "prashads" of some famous temples! She is a good exponent of Yoga, too. Their son plays the mridangam, and their daughter the veena—both competently. More Indian than the Indians in some ways is the Skelton family!

The year 1969 saw Dr. Skelton take up the serious study of nadaswaram—the wind instrument of the South which is heard in temples and weddings and festivals. Why the nadaswaram? "I was tremendously attracted by the sound of the instrument," says Dr. Skelton, "and, of course I am a bassoonist by training, so it comes more naturally to me."

And indeed, so naturally did it come to Dr. Skelton that within a year he was playing at temple car festivals and at weddings! Since then, he has continued to practise on his nadaswaram—when he can spare the time from teaching at his university and conducting opera. "Carnatic music has given so much to me." says Dr. Skelton, "it has become a part of my life. So I feel I must give some of my life back to Carnatic music."

It was this desire to serve the musical tradition of South India, to make information readily available to the scholar of Carnatic music in India and elsewhere, that led Dr. Skelton to prepare a project for a computerized catalogue. "In a few years from now", says Dr. Skelton confidently, "if we open an envelope containing a query about any Carnatic musical composition, the reply will be ready within ten minutes for despatch."

This is truly a tremendous service if one pauses to consider the wealth of musical compositions, the variety of composers, of languages, of rages that go to make up this rich musical tradition of South India.

"I hope to come back to Madras every year to learn all I can", says Dr. Skelton. "If my project can be helpful to students of this great music everywhere, my time and effort will have been very well spent."

Chicken Psychotherapy

West German Ministry of Agriculture experts have discovered an absolutely new social use for chickens, geese, ducks and other poultry. The Ministry's announcement on the opening of a show of pedigree poultry in Stuttgart, quoted by *Der Spiegel* magazine, says that this crowing, cackling and quacking community has a soothing effect on a man and eases physical strain. Poultry, it says, thus perform "important socio-political functions".

* * *

Operation Quiet Christmas

At the end of last year Italian police carried out an operation code-named "Quiet Christmas". They confiscated 145 tons of unregistered explosives and millions of explosive inflammable devices, twelve submachine guns, 1,2 0 rifles and shotguns, 355 pistols, and a large amount of ammunition. They also arrested 239 persons for breaking the law on acquiring and keeping explosives and violating police regulations.

From page 3

V.V.S. Aiyar

going, composing and printing were added to the trades taught.

All this involved large expenditure. A few sympathisers collected money daily in railway trains and turned over the collections to the Gurukulam. Staff members took students on long tours singing national songs and collected funds from the public. Sympathetic leaders like Dr. T. S. S. Rajan, a former inmate of 'India House" in London and now a leading medical practitioner in Tiruchi, sent sizeable amounts. S. Srinivasa Aiyangar, that generous patron of all national causes in Madras, promised to help.

Aiyar sought the help of the Tamil Nadu Congress Committee, for financial assistance. Rajaji advised Aiyar not to press his application for aid since he thought that by this help Aiyar's freedom of management of the institution might be affected. But Aiyar did not listen to the advice, to his regret later on. The Committee sanctioned 10,000 rupees and a cheque for 5,000 was handed over to him. Rajaji's fears later proved true and an unseemly controversy spear-headed by the Tamil Nadu Congress Committee President Dr. P. Varadarajulu Naidu virtually wrecked the institution later on, as we shall see by and by.

The students paid a fee of twelve rupees each. A few of them, too poor to pay, were provided free education. Whenever the Gurukulam was in financial need, Aiyar used to make a trip to Madras and come back with sufficient funds. Along with funds would also come bundles of books, treasured additions to the school library. Aiyar was bubbling with enthusiasm; it was his desire to make his Gurukulam another Shanti Niketan, another Nalanda or Takshashila.

The daily routine in the Gurukulam has well been described by a student, T. Narayanan of Amaravatiputhur. Writing after Aiyar's demise in 1925, Narayanan said in his reminiscences: "Aiyar would get up daily at 4 a.m. He would finish his morning ablutions and give a whistle at 4.30 a.m. All the students would then get up. They would immediately have to finish their morning toilet and be ready for exercises. When students went out to answer calls of nature, they would have to go with a small spade, dig in fixed areas a pit six inches deep and close it up with mud after the ablution was over. Committing nuisance in open fields as is the rural custom was strictly prohibited. (It is of interest to note that a similar practice was enforced in Gandhiji's ashrams).

"After this, the morning exercises would start. Physical exercises, running, wrestling—all formed part of it. Aiyar himself would join the students in this.

"A few prayer songs, and then to clean their rooms. Each one was also to clean his own plate and drinking vessel. Aiyar would likewise clean his vessels. It would be a treat seeing him do this neatly. The vessels cleaned, all would have their bath, this to be finished by 7 a.m.

"7 30 a.m. Inspiration Hour. Aiyar would recall the lives of great men, like Tiruvalluvar, Socrates, Gandhi, Tolstoy Tilak and others. On some days he would take the students out to the hills nearby and show them the wonders of nature.

"Aiyar did not take any food in the morning. At 11 a m., he would eat some cocoanut kernel, plantain fruit and groundnut, and some cooked rice. Only on Amavasya (New Moon) days, when there would be a feast, Aiyar would join sitting for food with everyone In the Gurukulam, tamarind and chillies were avoided in preparing food. Pepper and lime were used instead. In the night, Aiyar would take some fruits, coconut kernel and groundnut.

"Medical treatment on nature cure lines was encouraged in the Gurukulam.

"When Aiyar talked, he would not mix up words of one language with those of another. He would by his example inspire students to speak in Tamil without an admixture of English words.

"Aiyar was fond of the hymns of Ramalinga Swamigal. He would invariably have a verse from Ramalinga Swamigal for the morning prayer.

"When Aiyar wrote the life of Guru Govind Singh, he read it out to his students before sending it to the Press, His reading was clear, well enunciated, voice well modulated, the whole effect highly inspiring.

"He would read portions of Tilak's "Gita Rahasya' and explain how the book could be highly inspiring for everyday life.

"Aiyar would deliver readings from Kamban's Ramayana and elaborate on nuances in Kamban's writings. He held that Kamban's descriptions were superior even to Valmiki's.

"With his long beard, rounded body, *pancha kaccha* dhoty. broad upper cloth thrown over his shirtless shoulders, kum kum dot on his forehead, and dignified features, Aiyar sitting cross-legged and taking a class looked the very picture of a modern Agastya teaching Tamil on the sides of the Pothiya Hills.

"He was always desirous of meeting those who disagreed with him and listening to their say. He would explain his position with clear and effective words and give a full hearing to what they would say. Never would a harsh or angry word escape his tongue. Nor would he show animosity even to those who violently differed from him. He was not one to show scant respect to his detractors."

—To be Continued.

Fuel--Economy Needs Lead To Plastic Car Parts

By JAMES R. WARGO

DETROIT:

The automobile was once all iron and steel, wood and canvas. For more than half a century automakers believed the car buyer would reject the substitution of any of the basic materials with synthetics or with, to use the more odious word, plastics.

As late as the mid-1950's plastic parts in automobiles were limited to a few interior trim components and a handful of out-of-sight, under-the-hood, mechanical parts. The average weight of these parts per vehicle was around five pounds.

The soaring demand for cars coupled with the need to keep production costs down forced designers to up the plastic content. Gradually, more of the interior and more those concealed parts of the car were switched to synthetics.

The word plastic was still a dirty word to purists. Yet there was no buyer's revolt when, by the early 1960's, the plastic content in cars averaged more than 40 pounds.

When the 1966 Detroit models were introduced, except for the sporty and costly Chevrolet Corvette with its all fiber-glass body, plastic parts were commonplace throughout the interior, but the exterior remained sacrosanct. The body was the private domain of steel and chrome, and sometimes aluminum and zinc.

Then well into that 1966 model year Pontiac Division of General Motors announced it was replacing the zine die-cast grilles of certain models with plastic inserts, and then sat back to wait for the uproar. Much to the surprise of those who expected some kind of uproar, the change was met with ear-splitting indifference.

Now the great switch was on. Each new model year saw more applications of an ever greater variety of plastic components. In the 1973 models introduced this year, six years after Pontiac's hesitant introduction of its new grille, there is an average of 138 pounds of plastic per vehicle.

Inside, outside, and under the hood, plastic parts dominate. The entire leading end of the standard size Oldsmobile is a single piece of sheet-molded fiber glass.

Entire interior panels once laboriourly constructed and then built into cars a picce at a time are now rapidly molded and snapped into place.

Federal safety standards requiring bumpers that can withstand five-mile-per-hour frontal collisions, effective for the first time on 1973 models, gave rise to extensive application of the eleastomeric front end. This is a special form of a plastic called urethane, which can tolerate minor impacts and bounce back to its original shape without a trace of damage.

Pontiac, again, first introduced the urethane front end back in 1968 and has stuck with it throughout a difficult period of development. It was Chevrole, however, that this year came up with the most massive application. The 1973 Chevrolet Laguna has a single piece, wrap-around urethane front end, surrounding both headlights, the grille, and simultaneously acting as the bumper. Tha part involves 30 pounds of plastic and 56 pounds of steel bracing.

Elsewhere on the new cars, entire hoods, trunk lids, and rear protective panels are made of plastic.

Where once the debate among engineers was over merit of plastic over steel, it now more and more frequently centers on the relative merits of such things as injection molded elastomers, reinforced nylon or thermoplastic polyesters.

This year the light, medium-, and heavytruck buyer on examining his purchase might well find the entire tilt-front end, engine cover, headlight panel, wheel wells, instrument console, headliner, and airconditioning and heater enclosure, and sometimes even the trailer body, all made of a material that a few years ago he would have rejected out of hand.

Plastics have arrived in cars and trucks in a way no one believed possible a decade ago. Even the material's most dedicated promoters at times reveal they weren't prepared for the degree of success they are now enjoying. They cite total auto industry consumption in pounds, rather than in tons, as does the steel industry.

A plastics manufacturer recently announced that, "Total automotive use in 1973 is expected to reach 290 million pounds, compared with 252 million pounds in the 1972 calendar year. Consumption is expected to reach 700 million pounds in 1978, a growth rate of 18.6 percent per year."

What is contributing to this projection of growth in use of a material that for almost half a century was spurned much like a poor relative? The prime factor is weight.

The cost of fuel is about to climb rapidly, and at the same time the amount of fuel a car needs is being increased by the engine controls needed to meet federal emission standards. The lighter car burns less fuel, and plastic body panels are among the best ways of reducing weight.

The auto industry is also starting to cut unneeded length from cars. Some of the larger models can be expected to be a full two feet shorter within a few years. But even these reduced versions of the pride of Detroit will carry large amounts of plastic.

—*C. S. Monitor.*

Falling Into Line

Britain has joined the Common Market and its people will now have to adapt their traditions and habits to those of the people in the other EEC countries. Take, for instance, drinking. The Government, according to *Newsweek*, appointed a special committee with the aim of "bringing Britain's drinking habits into line with its new Common Market partners". This committee, headed by Lord Erroll, a former Conservative M.P., has prepared a rather lengthy report containing some valuable suggestions. One of them is to allow pubs to remain open fourteen hours a day instead of the current nine and a half, and to lower the "legal" drinking age from 18 to 17, as well as to permit younger children to visit pubs with their parents. These proposals are expected to be discussed in Parliament in the near future.

Padded Payroll

Corruption in the Cambodian army has broken all records says the West German *Der Spiegel*, commenting on an announcement made by the Cambodian Minister of Information that 100,000 non-existent soldiers have been drawing army pay.

With an army of 200,000 men, the Cambodian top military authorities have been drawing pay for 300,000 at the rate of $20 a month per man. An inquiry conducted under pressure from the Americans has revealed that Cambodian army commanders pocketed in this way some $2,000,000 monthly.

* * *

Sad Statistics

A poll conducted last December by the Institute of Demoscopy in Allensbach reveals that almost every fourth West German (to be exact, 24 per cent of the population) has been robbed at least once in the last three years. A similar poll in 1965 gave the figure as 18 per cent.

* * *

The Toll Trouble

Dr. Legge, an American physician, decided to swim through the Panama Canal. Before undertaking the feat, however, he was asked to pay toll. The administration classified him as a small craft of less than one-ton displacement.

STRANGE BUT TRUE

Hazardous Portfolio

Felix Auer of Switzerland says school children should be told "more about heroic ministers of finance than about war heroes." He has gone through history and found that more ministers of finance were beheaded, hanged or otherwise dispatched for mismanagement than generals for losing wars. The record-holder is France: between 1315 and 1781, thirty-seven of her ministers of finance died a "martyr's death."

* * *

Wanted: A Hermit

A public notice at Villarreal in the Spanish province of Castellon de la Plana said the Chapel of the Holy Virgin of Grace urgently required the services of a hermit. The notice said he should be devout, pass examination in grammar, arithmetic, calligraphy and literature, be well versed in the rights and duties of a hermit and know the names of the local mayor and councillors. Applicants were promised a handsome remuneration.

* * *

It Pays

Dale Electric in Leeds (Britain) will have to pay its employees about £920 for giving up smoking in 1972. The firm had arranged a competition to that end, and 140 men entered it and 98 fulfilled all stipulations. They are to receive over £9 each. This year Dale Electric is promising £14. The Management are sure that the expense will be more than covered by the reduction in the time-out employees take to have a smoke.

* * *

Policing The Police

Every other New York policeman was mixed up in graft in 1971 Such is the conclusion drawn by the investigating commission appointed by Mayor John Lindsay. The commission, headed by Judge Whitman, said the police were extremely tolerant of corruption, and proposed setting up a new, anti-graft department at Police Headquarters in New York.

* * *

Victims Of Excesses

The French National Institute for Health and Medical Research has arrived at the conclusion that French men die on the average eight years before their wives because they drink and smoke much more and drive too dangerously. Its statistics reveal that deaths caused by alcoholism have risen since 1949 by 80 per cent for men and 32 per cent for women.

* * *

That Theft

Officials of the University of Michigan (USA) recently reported the theft of a film valued at $200. It's called "The Adventures of Sherlock Holmes"

From page 1

Acre Of Sea Can feed an Army

we want is equipment that will cut down on labor." Certain "interested parties" apparently have begun committing some ideas to the drawing board.

Selecting the supergrower for breeding purposes is a relatively simple task. Thus Mr. Hughes expects still faster growing rates and more efficient food-conversion ratios in future. He's looking for other characteristics too.

Commercial lobster raising, for the present, will require separate pens for each lobster because of a tendency to cannibalism. But Mr. Hughes believes he can breed docility into the lobster as well as impressive growth rates. Such a breed could be housed safely in communal pools.

The hatchery, meanwhile, is breeding lobsters with two crusher claws. The crusher claw is much heavier and meatter than the cutting claw. "It's a slow job but it's coming along," says Mr. Hughes. Ultimately, though, he hopes to breed claws right out of the lobster. "There is more meat per pound of lobster in those individuals occasionally found in nature without claws (than in normal specimens)," he points out.

OYSTERS ON A STRING

Near Wareham, Mass., a winch churns noisily and moments later a large metal frame appears above the surface of the sea.

When it was placed here in Buzzards Bay some 2½ years ago, it had appeared empty except for a series of strings suspended from the top. Now fully developed oysters cling so densely to these same strings that, from a distance, the frame, or rack as it's called, looks like a solid cube.

This is three-dimensional oyster rearing, the method which some enthusiasts suggest will place this delectable shellfish on the average American's menu as frequently as it graced his forebears' tables in previous centuries.

Back in the days when Diamond Jim Brady would eat a dozen or so oysters as a mid-morning snack, Americans ate better than six billion oysters a year. Today, 2½ times as many people eat fewer than half as many oysters. A century ago New Yorkers spent more money on oysters than on butcher's meat. Even as recently as 1948 U.S. per capita consumption was twice the present figure.

A drastic falloff in supplies, not a sudden distaste for the delicacy, accounts for the oyster's decline. The average under-30 American just hasn't been exposed to oysters the way his forebears were. Drained marshes, filled estuaries, dredged harbors, man-made shorelines, silted and polluted waters have cut into natural supplies. There are fewer and fewer places for the oysters to grow.

Storms, such as the one which buried half the oyster crop in Long Island Sound in 1950 and the 1966 hurricane which cut Gulf of Mexico production by half, contributed to the decline. Starfish and a snail known as the oyster drill, the only natural predators of the oyster, are not the prime culprits.

Under the suspension method of oyster rearing, storms and predators present few problems. Silt stirred up by a storm falls harmlessly off the oyster into the seabed below. Starfish and drills can gather in their thousands below but do no more than "look up" longingly.

Aqua Dynamics, the Cape Cod company which has leased 90 acres of seabed here, gets better than 90 percent survival of its oyster crop. After several years of experimentation, the company now is moving into full-scale production.

It finds that oyster growth rate is doubled by this suspension method—2.5 years for a good-sized oyster against 5 to 6 years for oysters raised on the seabed. The algae on which oysters feed are more readily available nearer the surface, it seems. Flavor and qnality are excellent. For some reason the shells are thinner too, making shucking a simple matter even for the amateur. This also means more meat per pound of oysters. Obviously, too, more of the shellfish can be raised in a given area by this method.

When Apua Dynamics places one of its seeded frames in the water, it weighs around 500 pounds. When raised 2.5 years later, it has 10 times that weight because of the mature oysters. That's 4,500 pounds of oysters from a 10-foot by 7-foot by 5-foot volume of the sea.

The Japanese worked out this superior method of oyster production back in the 1930's and promptly raised their output tenfold in a given area. They now get up to 46,000 pounds of oyster meat a year for every acre under production. The Australians are also major producers using this method. So are the Spaniards, though mussels are unquestionably their foremost shellfish crop.

It has been estimated that if Japanese success with the oyster were duplicated on just 1 percent of the world's continental-shelf areas, the meat production would be enough to satisfy the entire world's estimated requirements for the year 2,000, if it could be delivered cheaply and efficiently to needy people.

Another estimate suggests that, if 2 percent of Washington State's Puget Sound were similarly cultivated, U. S. seafood production would double.

HERE COME THE CATFISH

A couple of years ago, John E. McLemore was sketching a gasoline ad but his thoughts were elsewhere. He was thinking of fish—specifically catfish.

As an art student at the Sam Houston University, he was preparing for a career in advertising. But increasingly the idea of raising "fat cats" had greater appeal.

Although he didn't know it at the time, he was just one of thousands of newcomers being attracted to catfish farming. The infant industry was about to embark on an explosive growth that would see production of dressed fish climb from little over one million pounds in 1970 to 12 million in 1972—a twelvefold growth in two years.

That night the young Texan phoned his parents. Could he turn the family's 400-acre mountain ranch in Oklahoma into a fish farm? "Yes," came the reply.

The ranch was to have been the retirement home for Mr. McLemore's parents. Instead, it became the Kiamichi Fish Farm, a relatively small but successful operation. In fact, Mr. McLemore's ability, after just two years in the industry, recently saw him elected to the board of directors of the Catfish Farmers' Association.

Pioneers pushing westward across the U.S. discovered the tasty catfish in almost every river they crossed. But although popular as an eating fish right from the start, it was not until 1960 that the "cat" appeared in farm ponds, whereas bass and trout had long been known.

Even then, the infant industry advanced only slowly until 1969 when a sudden enthusiasm for catfish culture, and for some a false vision of "easy money," stimulated the industry to mushroom growth.

Most industry spokesmen foresee continued rapid growth. That 12 million pounds could double in 1973, they say.

Mr. McLemore echoes the sentiments of most in the industry when he paints as optimistic picture of the future. "People like fish and, as natural supplies dwindle, they will turn more and more to the fish farmer," he says. "The industry can only grow."

Catfish farmers also feel their pond-raised product—from hatching to harvesting in two seasons—is superior in flavor to its wild relative. They're confident, too, that, as catfish become better known, they will be widely sought throughout the country.

Mr. McLemore harvests something like 2,000 pounds of fish per surface acre from his ponds. He reckons he can turn a profit of between $150 and $250 per acre for his efforts. These figures are higher than most. But Mr. McLemore is one of very few in the industry who hatches, raises, processes, and markets his own product. "I extract the profits from every segment of the industry," he says.

To do this, though, he works a six-day week and, during the spawning season, every day of the week, 24 hours a day except for quick catnaps between feeding the fingerlings.

Currently he runs a 35.5 acre operation which he plans to boost by further 100 acres. He sees a 200-acre operation as ideal.

Operation Japinex

Following nine months of negotiations the Brittsh Petroleum Company and the Japanese Overseas Petroleum Corporation signed in Tokyo at the end of last month an agreement on the sale to the Japanese of part of the British Petroleum interest in Abu Dhabi oil. This completed "Operation Japinex," as the secret negotiations were code named, involving a £330 million deal. "The whole Japanese dialogue has had the aura of an Oriental mystery," commented the Daily Telegraph.

British petroleum remains the biggest stockholder in the consortium, with a 27.5 per cent interest, and the share of Overseas Petroleum is 22.5 per cent. The other stockholders are the Abu Dhabi National Oil company and the Compagnic Francaise des petroles, each with a 25 per cent interest.

The deal is expected to provide Japan 21 million tons of oil annually. She now imports yearly some 200 million tons.

Pet Funerals

Pet burials have become a fast-growing industry in the United States. The total number of per cemeteries now stands at 410. The burial of a cat with a vault, a bronze memoria1 and an evergreen tree costs $900. A more modest burial—in a common grave costs $30.

From page 9

part of the plant without having to leave the building.

Like other cities, Yaroslavl has big heat-and-power stations which provide piped heat for all its enterprises and 95 per cent of its dwellings.

There is also a special free, communal "emergency" system in case of a breakdown of the network of water mains, heating or electricity.

The cost of extra heating homes need is largely met by the State.

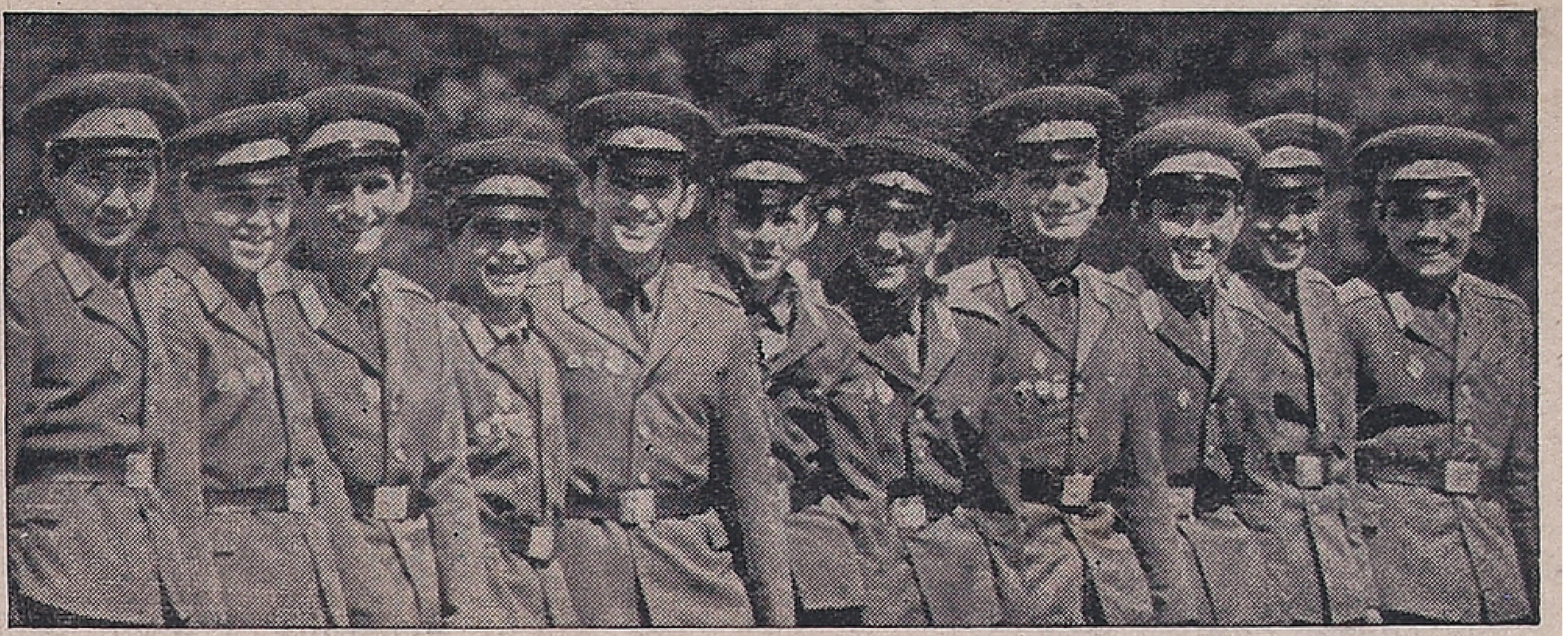
Rents are extremely low—at most about five per cent of the family budget—and by law the cost of heating must not exceed 40 per cent of the rent.

In Yaroslavl, that means for every rouble paid by the owner of a flat for heating the state adds another five.

The inhabitants of the 7,000 flats in the town which still have coal fires buy fuel at price reduced to a half or a third cost, but the number of such flats is rapidly decreasing.

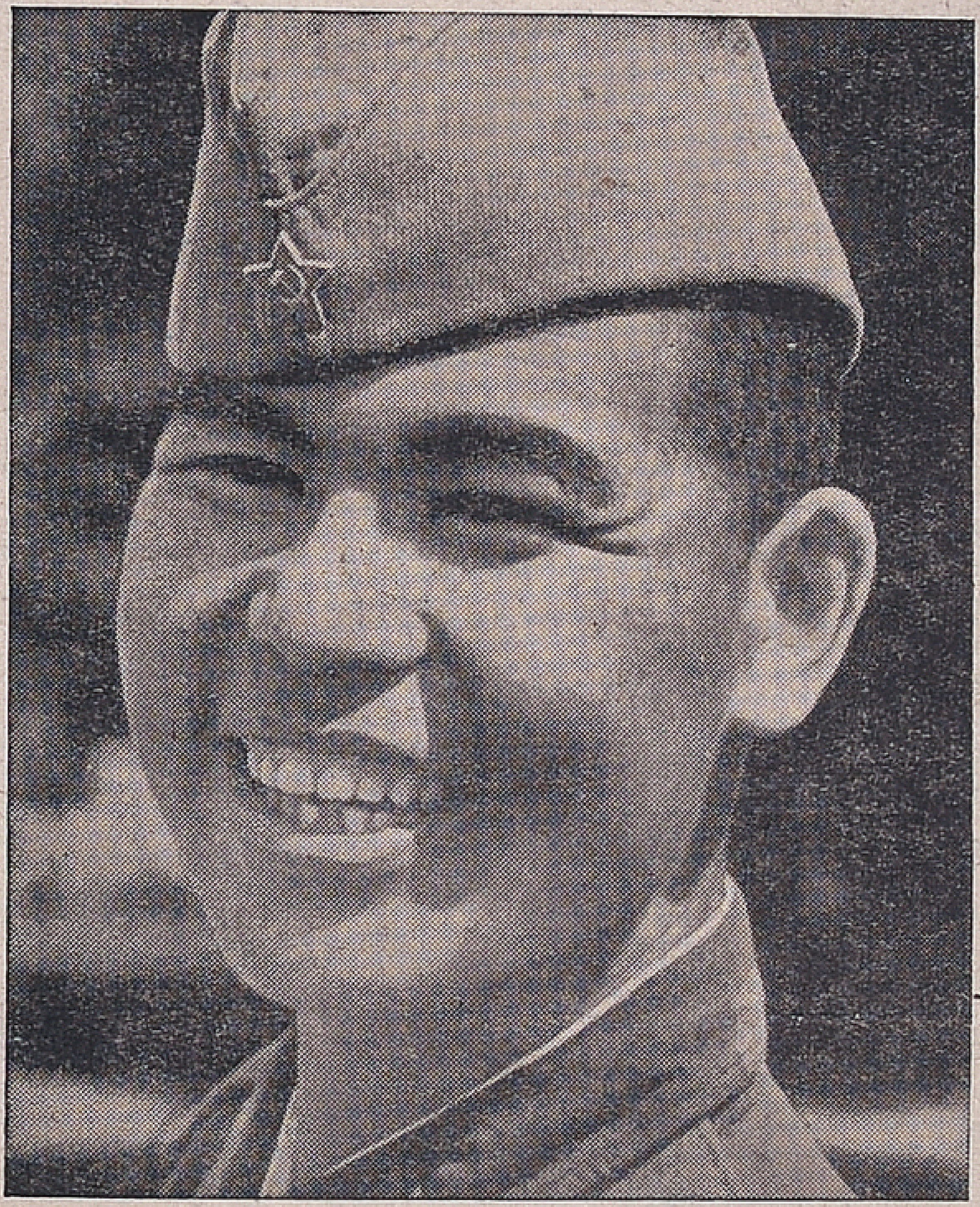
One more item of winter expenditure: this winter, Yaroslavl has at its disposal 72 ski-ing centres, 86 skating rinks and —outside the city limits—12 winter sports centres.

Ochir Manjiyev, A Kalmyk



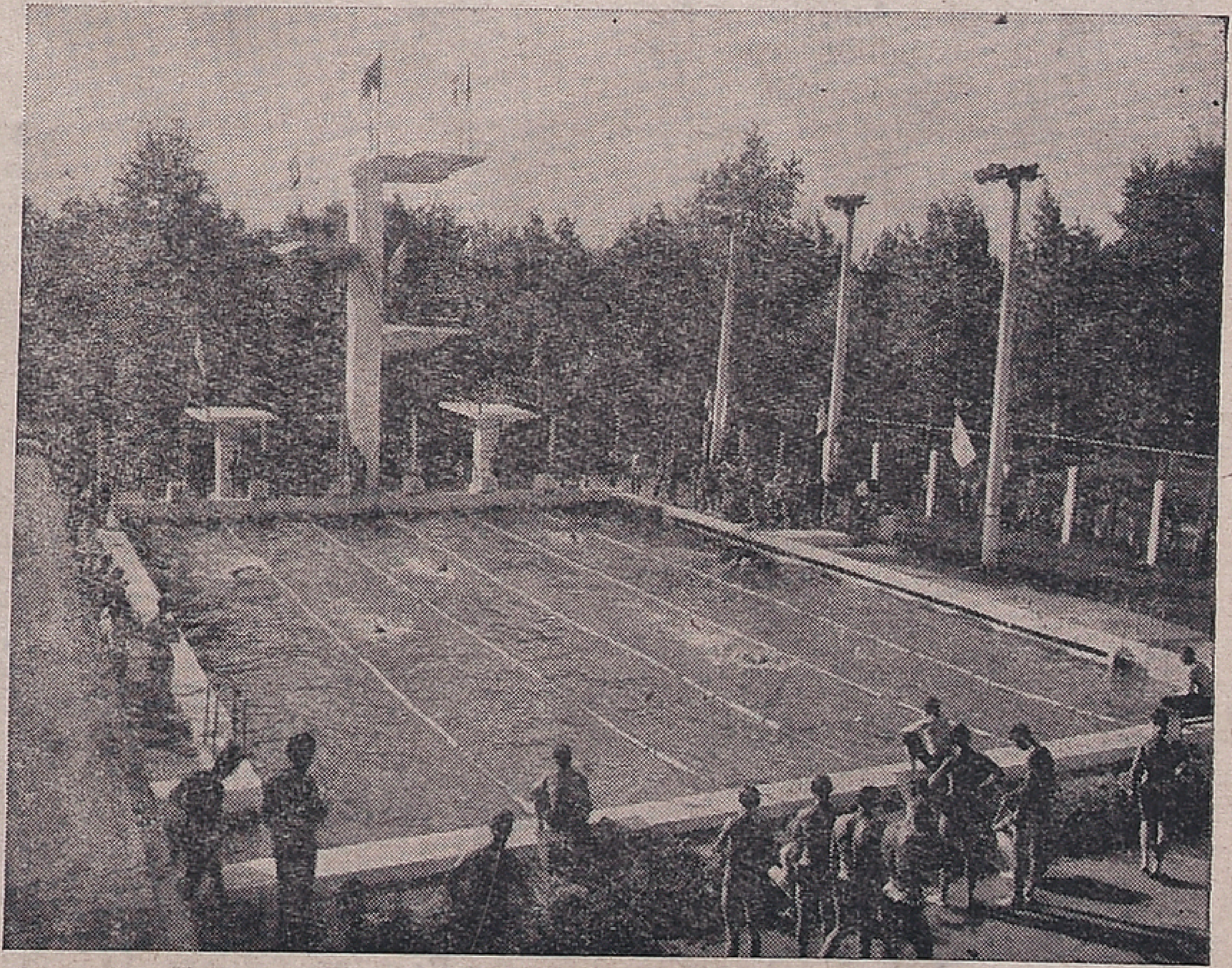
This picture shows soldiers of the Soviet Army representating different Nations of the USSR

These boys are in one gun detachent and on the stage they form a violin Quartet



Nasim Dadabayev, an Uzbek

Tank Crews



At the swimming pool of an Army Unit

From Second Cover

fighting unity of the Soviet armed forces.

This article is published in connection with the Soviet Army Day that falls on the Feb. 23.

The Red Army was built and strengthened from the very outset by the efforts of all the nations of the Soviet land. The Russian people were the cementing force in it. Their revolutionary energy and selflessness, hard work and profound internationalism rightly won them the sincere respect of the other nations and nationalities of our socialist homeland.

The friendship of the peoples of the USSR embodies the class alliance of workers and peasants. This is based on the community of their political and economic interests and on ideological unity. This friendship grew strong in joint revolutionary struggle for building socialism and was steeled in bitter battles against the foes of the world's first socialist state.

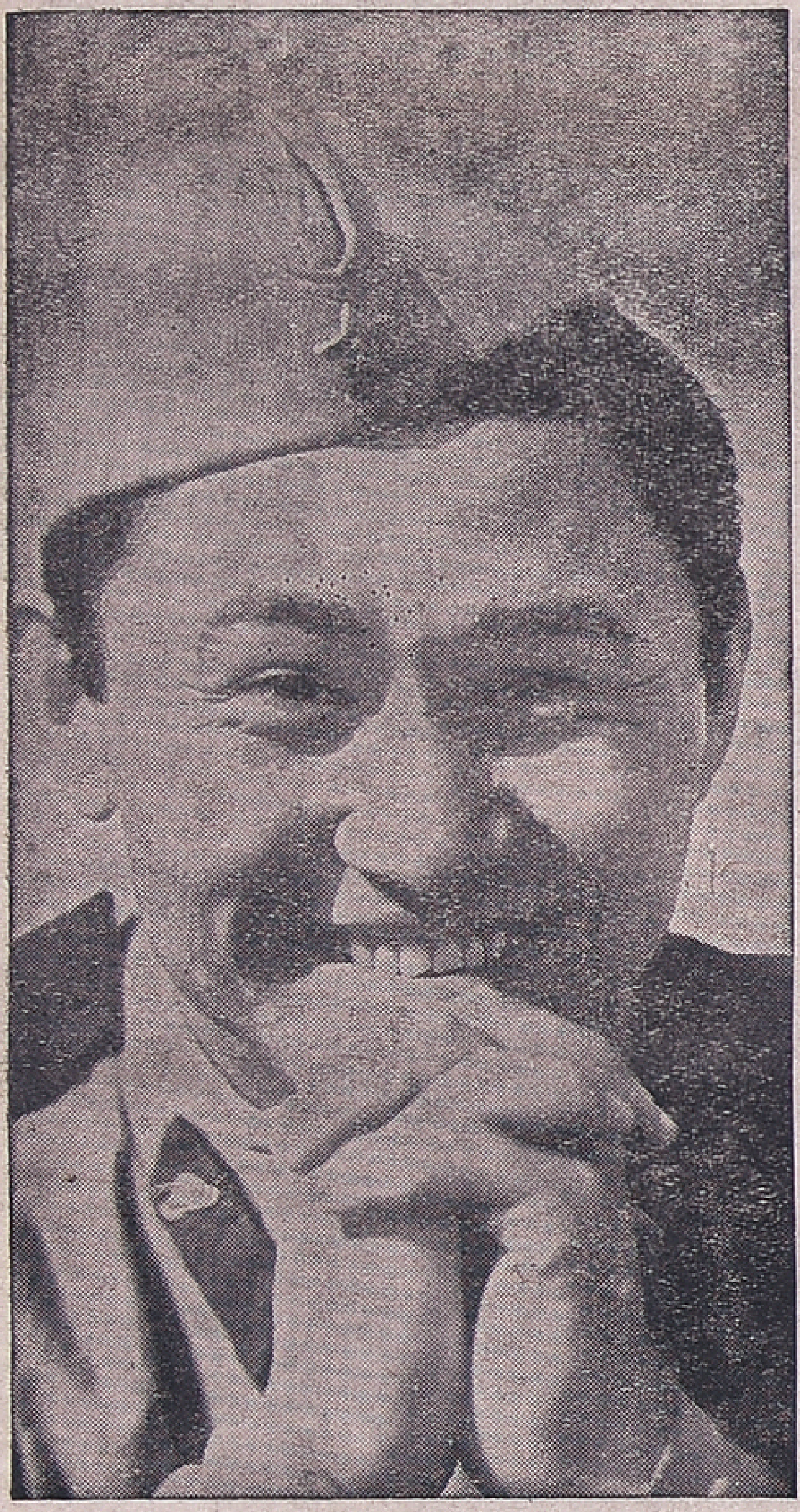
The heroic saga of Civil War includes the brave deeds of soldiers of army units commanded by the Russians Vasili Chapayev and Vasili Blukher, by the Ukrainian Nikolai Schchors, by the Kazakh Amangeldy Imanov, by the Latvian Jan Fabricius, and other famous military leaders.

It is deeply gratifying for me to observe that among the heroes of Civil War were quite a number of my

(*Contd. on Last Cover*)

Private Kadyrbet Tadjieyev sings folk songs at leisure time

Yakov Curkhvidze, an Adjarian



Kadyrbek Tajieyev, a Kirghiz

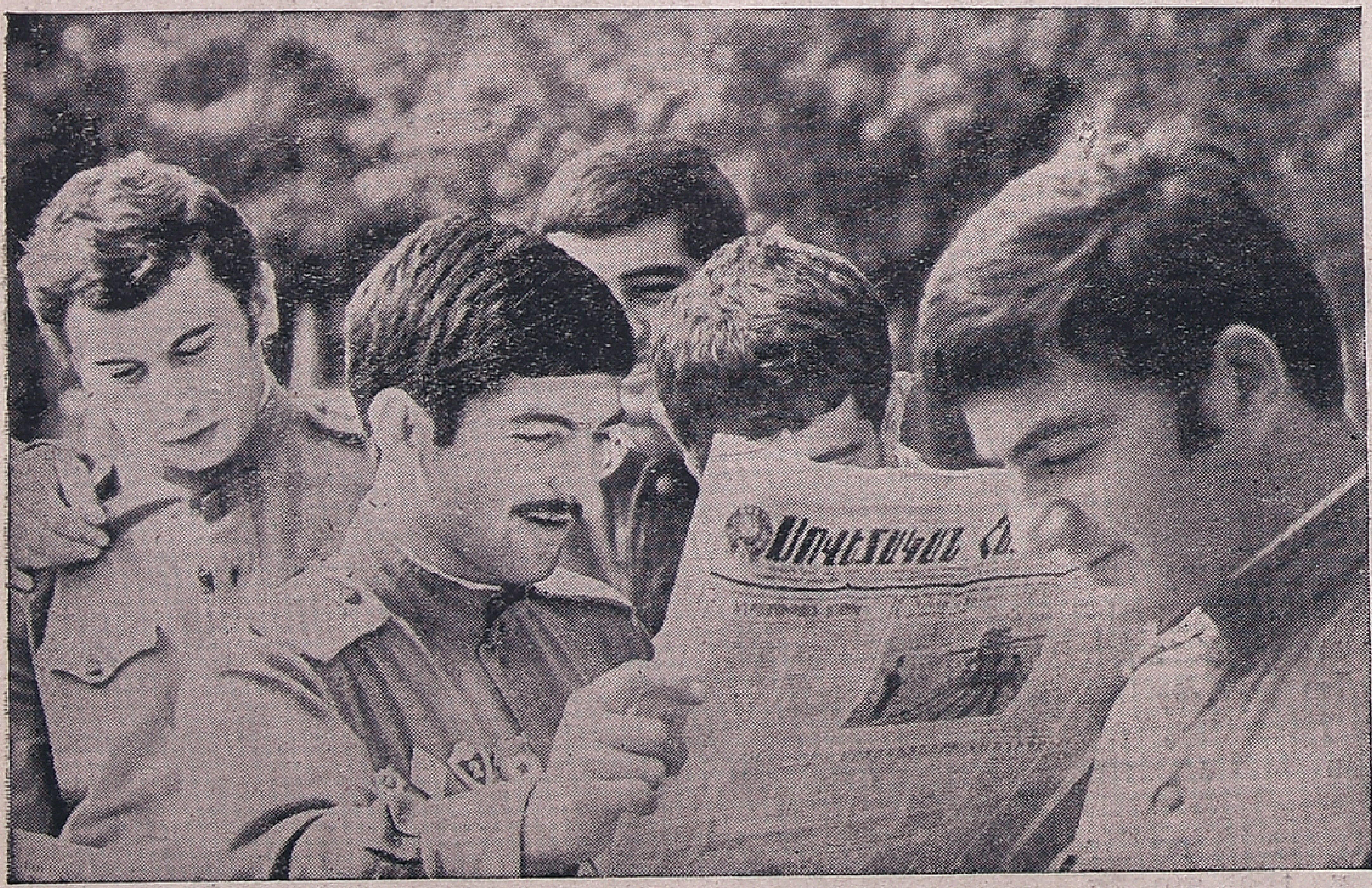
From Third Cover

fellow-countrymen, representatives of the Armenian working people. Two of them have become truly legendary figures.

The Great Patriotic War (1941–1945) against Nazi invaders was a severe and decisive test of strength and viability of the Soviet multi-national state and of its armed forces. The rulers of Nazi Germany, striving to wipe out the world's first socialist state, counted largely on the possibility of breaking up the internationalist brotherhood of Soviet nations. But these hopes of the Hitlerites were dashed to the ground.

In the grim year of 1941, the approaches to Moscow were defended by General Panfilow's division formed in Kazaghstan. It included men from the Ukraine, Kirghizia and Kazakhstan. Many of them gave their lives on the battlefield, but the enemy could not break through to the capital.

Among those decorated with orders and medals are soldiers of all nationalites of the USSR and other countries. Men and women of a hundred nationalities of our country were decorated with the Gold Star of Hero of the Soviet Union—the highest battle decoration.



Left : Newspapers from various republics are delivered to this Military Unit : Right : Sergei Uvarov, a Russian

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